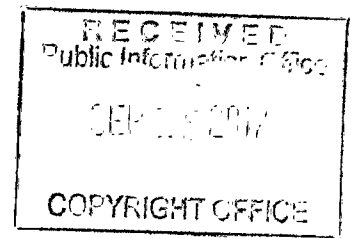


Before the  
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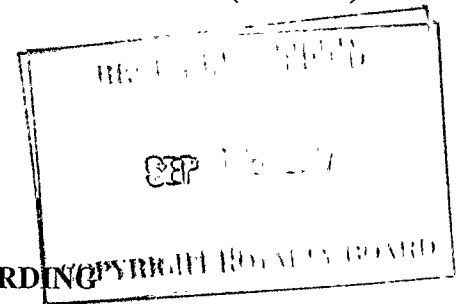


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In the Matter of )

Distribution of the )

2010, 2011, 2012, and 2013 )  
Cable Royalty Funds )  
\_\_\_\_\_ )

Docket No. 14-CRB-0010-CD (2010-13)



WRITTEN REBUTTAL STATEMENT REGARDING  
ALLOCATION METHODOLOGIES  
OF PROGRAM SUPPLIERS

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September 15, 2017

Before the  
COPYRIGHT ROYALTY JUDGES  
Washington, D.C.

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In the Matter of )

Distribution of the )

2010, 2011, 2012, and 2013 )

Cable Royalty Funds )

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Docket No. 14-CRB-0010-CD (2010-13)

WRITTEN REBUTTAL STATEMENT REGARDING  
ALLOCATION METHODOLOGIES  
OF PROGRAM SUPPLIERS

The Motion Picture Association of America, Inc. ("MPAA"), its member companies and other producers and/or syndicators of syndicated movies, series, specials, and non-team sports broadcast by television stations ("Program Suppliers"),<sup>1</sup> in accordance with the procedural schedule set forth in the July 21, 2016 *Order Regarding Discovery* issued by the Copyright Royalty Judges ("Judges"), hereby submit their Written Rebuttal Statement Regarding Allocation Methodologies ("WRS-A") in the consolidated 2010-2013 Cable Royalty Distribution Proceeding. Program Suppliers are submitting this introductory memorandum in order to summarize the rebuttal evidence they will present in this proceeding.

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<sup>1</sup> A listing of MPAA-represented Program Suppliers who submitted royalty claims for the 2010-13 cable royalty years was included as a part of MPAA's January 21, 2015 and July 6, 2015 Petitions to Participate filed in connection with this consolidated proceeding.

## I. INTRODUCTION

On December 22, 2016, Program Suppliers submitted their Written Direct Statement Regarding Allocation Methodologies in which Program Suppliers maintained that the relative market value of distantly retransmitted programming is best expressed by the relative level of subscriber viewing of that programming.<sup>2</sup> As support, Program Suppliers presented evidence of aggregated distant viewing for each Agreed Category<sup>3</sup> that remains in controversy, as measured by Nielsen, and estimated by economist, Dr. Jeffrey S. Gray.

Program Suppliers' WRS-A focuses primarily on direct testimony offered in this proceeding by the Joint Sports Claimants ("JSC"), Commercial Television Claimants ("CTV"), and the Canadian Claimants Group ("CCG"). Program Suppliers' rebuttal testimony demonstrates that the methodologies presented by the other Allocation Phase parties are flawed and not reliable for determining the relative market value of the programming at issue in this proceeding, and that a royalty allocation award based on the aggregated distant viewing for each Agreed Category provides reliable evidence of relative market value, and should be the basis for the Judges' royalty allocation awards to Program Suppliers in this proceeding.

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<sup>2</sup> Program Suppliers filed an Amended Written Direct Statement Regarding Allocation Methodologies ("Amended WDS-A") on March 9, 2017, and submitted corrections to that filing on April 3, 2017 and April 25, 2017.

<sup>3</sup> See Notice Of Participant Groups, Commencement Of Voluntary Negotiation Period (Allocation), And Scheduling Order at Exhibit A (November 25, 2015).

## II. REBUTTAL TESTIMONY SUBMITTED BY PROGRAM SUPPLIERS

Program Suppliers will present the following rebuttal witnesses, each of whom will sponsor his or her testimony and accompanying exhibits or appendices (copies of which are contained in Program Suppliers' WRS-A):

**Sue Ann R. Hamilton**, the Founder and Principal of Hamilton Media, LLC. Ms. Hamilton has significant experience working in the cable industry, including in the areas of content licensing and distribution consulting for program suppliers and negotiating content deals for the National Cable Television Cooperative, which has more than 850 cable system member companies. Ms. Hamilton submitted written direct testimony on behalf of Program Suppliers in which she discussed, among other things, how cable operators select programming, and offered her views on how cable operators are likely to value nonnetwork programs as shown on distantly retransmitted broadcast signals in a hypothetical market where the cable compulsory license does not exist.

For purposes of her rebuttal testimony, Ms. Hamilton analyzed the Written Direct Testimony of James M. Trautman ("Trautman testimony") and the attached report prepared by Bortz Media & Sports Group, Inc. ("Bortz"), entitled *Cable Operator Valuation of Distant Signal Non-Network Programming: 2010-2013* (the "2010-13 Bortz Report"), and the Written Direct Testimonies of Allan Singer ("Singer testimony") and Daniel M. Hartman ("Hartman testimony"), all of which were submitted by the JSC. Ms. Hamilton also considered the Written Direct Testimony of Dr. Gregory Crawford, submitted by CTV ("Crawford testimony"). Ms. Hamilton's rebuttal testimony discusses her disagreement with Trautman, Singer, and Hartman's conclusions that the 2010-13

Bortz Report offers a reasonable basis for determining the market value of distant signal programming, explains why the Horowitz survey cannot replace reliance on subscriber viewing data (even though she believes the Horowitz survey is a better survey), and responds to Singer and Hartman's statements regarding the value of distant signal sports programming to CSOs. Ms. Hamilton also explains her disagreement with presumptions regarding CSO behavior underlying Dr. Crawford's analysis.

Jeffrey S. Gray, Ph.D., is the founder and President of Analytics Research Group, LLC. Dr. Gray provided initial testimony in this proceeding, which was filed on December 22, 2016, amended on March 9, 2017, and corrected on April 3, 2017. Relying on certain basic economic principles, Dr. Gray employed Nielsen data, multiple other data sources, and regression analyses to estimate the level of distant viewing to a random sample of distantly retransmitted stations carrying compensable works for each of the Agreed Categories of programming for each of the royalty years at issue in this proceeding, and determined the relative market value of Program Suppliers category for each of the 2010-13 Funds based on multiple factors, including volume and distant viewership.

For purposes of his rebuttal testimony, Dr. Gray analyzed the amended and corrected written direct testimonies of CTV witnesses, Drs. Gregory Crawford and Christopher J. Bennett; JSC witness, Dr. Mark A. Israel; and CCG witness, Dr. Lisa M. George. In his rebuttal testimony, Dr. Gray opines that his conclusions regarding the relative market value of programming described and reported in his initial, amended, and

corrected testimony are unaltered by written direct testimony submitted on behalf of CCG, CTV, JSC, and the Devotionals. Dr. Gray further asserts that necessary modifications made to the regression models proposed by opposing parties' experts to reflect the regulated structure of the 2010-2013 royalty payments made by CSOs demonstrate that the regression results do not support the Bortz survey results nor its suggested royalty allocations. Dr. Gray concludes that Dr. Israel's analysis of large cable systems' programming expenditures and Dr. Crawford's comments on the importance of programming heterogeneity are not relevant to CSO's carriage choices concerning distant signals and should not be considered in how to distribute paid royalties to copyright owners. Dr. Gray also opines that while neither the Bortz nor the Horowitz surveys provide a reasonable basis for measuring marketplace value, the Horowitz survey is superior to the Bortz survey because it corrects for some of the Bortz survey's major flaws.

**Martin R. Frankel, Ph.D.**, a recent retiree, served as a Professor of Statistics and Computer Information Systems at Baruch College, City University of New York for more than 30 years. In his written direct testimony, Dr. Frankel described his involvement with Program Suppliers' Horowitz survey, including his selection of the survey samples for each of the 2010-13 years, and his process for weighting the survey results.

For purposes of his rebuttal testimony, Dr. Frankel reviewed the Trautman testimony and the 2010-13 Bortz Report, as well as the discovery documents produced by the JSC related to Trautman's testimony. While Dr. Frankel was asked by Program

Suppliers to provide his professional opinion regarding the validity of the sampling and estimation procedures undertaken by Mr. Trautman and Bortz to produce the weighted survey results and confidence intervals set forth in the 2010-13 Bortz Report, he was unable to replicate or test the weighted survey results or the confidence intervals because JSC chose to redact and remove information from its discovery production that is necessary for Dr. Frankel, as well as any other competent statistician, to perform such analyses.<sup>4</sup> Consequently, Dr. Frankel is unable to render an opinion regarding the validity of the 2010-13 Bortz weighted survey results or the confidence intervals.

Howard Horowitz, is the Founder and Chief Executive Officer of Horowitz Research, Inc., a market research firm providing research and consulting services to the television, cable, telecommunication, and broadband industries, including studies for multiple system operators (“MSOs”) and cable systems. On December 22, 2016, Mr. Horowitz submitted written direct testimony on behalf of Program Suppliers in which he described a cable operator survey for the 2010, 2011, 2012, and 2013 royalty years (“Horowitz Survey”) designed to carefully replicate the methods and procedures of the Bortz Survey prepared for the 2005 royalty year, and to improve upon the Bortz Survey by solving several of its information and category weaknesses that were recognized by the Judges in the 2004-2005 Cable Phase I Proceeding. Mr. Horowitz corrected his testimony on April 25, 2017.

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<sup>4</sup> Program Suppliers filed their Motion To Compel Production Of Unredacted Documents And Data From The Joint Sports Claimants (“Motion”) in this proceeding on April 27, 2017. That Motion remains pending.

For purposes of rebuttal, Mr. Horowitz analyzed the Trautman testimony and 2010-13 Bortz Report. Mr. Horowitz also assessed the so-called improvements to the 2010-13 Bortz survey over the 2004-05 Bortz survey and compared the 2010-13 Bortz survey to the Horowitz survey. In his rebuttal testimony, Mr. Horowitz opines that the changes to the 2010-13 Bortz survey have (1) distracted survey respondents from the purposes of allocating the fixed budget in relation to subscriber attraction and retention by leaving out all reference to subscriber value; (2) introduced even more bias in favor of the JSC category than the 2004-05 Bortz survey by changing the frame of reference from “relative value” to “relative cost,” and not providing program examples to compare to “live professional and collegiate sports;” and (3) made the 2010-13 Bortz survey unreliable by asking respondents about how much they would spend on disaggregated content, a question which one cannot assume respondents have the requisite expertise or experience to answer. Mr. Horowitz also concludes that if the Judges choose to rely on a cable operator survey, as between the Horowitz survey and the 2010-13 Bortz survey, the Horowitz survey remains a better survey instrument notwithstanding the changes introduced to improve the weaknesses of prior versions of the Bortz survey.

**Joel Steckel, Ph.D.**, is a Professor of Marketing and the Vice Dean for Doctoral Education, and Acting Chairperson of the Accounting Department at the Leonard N. Stern School of Business, New York University. Dr. Steckel submitted written direct testimony on behalf of Program Suppliers in which he concluded that neither the Bortz survey nor the Horowitz survey is sufficiently reliable to assist the Judges in determining the relative market value of the programming at issue in this proceeding because surveys



of cable operators are inadequate, in his opinion, for measuring marketplace value or return. Notwithstanding these criticisms, Dr. Steckel found that the Horowitz survey incorporated improvements that make it better than the Bortz survey.

For purposes of rebuttal, Dr. Steckel analyzed the Trautman testimony and the 2010-13 Bortz Report. He also reviewed the Written Direct Testimony of Nancy A. Mathiowetz, Ph.D., dated December 22, 2016 (“Mathiowetz testimony”); and *The Value of Canadian Programming to Cable Systems in the United States in 2010, 2011, 2012, and 2013* by Gary T. Ford and Debra J. Ringold, dated December 2016 (“Canadian study”). In his rebuttal testimony, Dr. Steckel concludes that the changes made to the 2010-13 Bortz study do not address the concerns raised in his direct testimony; have little to do with improving the survey, and may have a negative effect on the reliability and validity of the responses provided to the Bortz survey questions; are not capable of assisting the Judges in determining the relative market value of programming at issue in this proceeding; and that Dr. Mathiowetz’s support of the 2010-13 Bortz survey is not based on any literature, research, or analysis, but merely her own unsupported assertions. Dr. Steckel further opines that the Canadian study, although somewhat better than the Bortz survey, is ultimately unfit to assist the Judges in this proceeding.

Jeffery A. Stec, Ph.D., is a Vice President with Charles River Associates, an international economic consulting firm focused on advising clients and counseling in the areas of complex litigation and intellectual property matters in the context of economics, strategy, valuation, licensing, and litigation support services. Dr. Stec specializes in the application of economics and survey research to the valuation of various forms of

intellectual property.

For purposes of his rebuttal testimony, Dr. Stec reviewed the Written Direct Testimony of Dr. Michelle Connolly (“Connolly testimony”) and the Written Direct Testimony of Dr. Mark A. Israel (“Israel testimony”), both of which were submitted by JSC. Dr. Stec opines that Dr. Connolly’s support of the 2010-13 Bortz survey for determining the relative market value of different types of compensable programming carried on distant signals fails to consider flaws inherent in the use of the 2010-13 Bortz survey, including the fact that the survey framework and the survey results do not represent the relative market value of the different types of programming content as would be determined from unregulated market transactions. Similarly, Dr. Stec concludes that the regression analysis performed by Dr. Israel for the purposes of this proceeding is inherently flawed because the data Dr. Israel used in his regression analyses come from transactions in a regulated market which should not be expected to appropriately proxy for statistical relationships that would result from a regression using unregulated market data.

### **III. PROGRAM SUPPLIERS’ ALLOCATION CLAIMS**

Program Suppliers’ proposed allocations for the 2010-2013 Cable Funds remain as they were reported in the *Errata To Amended And Corrected Written Direct Statement Regarding Allocation Methodologies Of Program Suppliers* filed with the Judges on April 3, 2017; however, for clarity, they are listed again here. These proposed percentage allocations should be

applied to the 2010-13 Cable Funds following the Judges' final distributions to the Music Claimants and National Public Radio ("NPR").<sup>5</sup>

<u>Royalty Year</u>	<u>Basic Fund (%)</u>	<u>3.75% Fund (%)</u>	<u>Syndex Fund (%)</u> <sup>6</sup>
2010	50.94%	70.71%	100.00%
2011	49.92%	70.39%	100.00%
2012	36.17%	61.98%	100.00%
2013	45.09%	67.58%	100.00%

Program Suppliers reserve the right to change their allocation claims in light of the evidence presented by other claimants in this proceeding.

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<sup>5</sup> See Amended Order Granting Motion For Final Distribution Of 2010-2013 Cable Royalty Funds To Music Claimants (August 23, 2017); Order Granting Request For Final Distribution Of 2010-2013 Cable Royalty Funds To National Public Radio (August 23, 2017).

<sup>6</sup> The only Allocation Phase Parties participating in the 2010-13 Cable Syndex Funds are Program Suppliers and the Music Claimants. In light of the Judges' ruling granting a final distribution of 2010-13 cable royalties to the Music Claimants, all remaining 2010-13 Cable Syndex Funds are no longer in controversy and should be allocated to Program Suppliers.

Respectfully submitted,

*/s/ Gregory O. Olaniran*

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Dated: September 15, 2017

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Docket No. 14-CRB-0010-CD (2010-13)

**REBUTTAL TESTIMONY OF  
SUE ANN R. HAMILTON**

**SEPTEMBER 15, 2017**

## **REBUTTAL TESTIMONY OF SUE ANN R. HAMILTON**

### **I. BIOGRAPHICAL INFORMATION**

My name is Sue Ann R. Hamilton. I am the Founder and Principal of Hamilton Media LLC ("Hamilton Media"), a consulting firm dedicated to advising and representing public and private media companies, including both content creators and multi-platform distributors, regarding the finer points of content distribution via multiple system operators ("MSOs") as well as over-the-top ("OTT") video distributors. More detailed information summarizing my education and experience and a copy of my curriculum vitae are included in the Written Direct Testimony that I submitted in this proceeding on December 22, 2016, as a part of Program Suppliers' Written Direct Statement ("Hamilton WDT"). That experience includes serving as the primary person responsible for programming decisions at several large cable system operators ("CSOs"), including AT&T Broadband, LLC ("AT&T"), Adelphia Communications Corporation, and Charter Communications, Inc. ("Charter").

My Written Direct Testimony explained how CSOs select the stations that they carry; provided information regarding the volume of programming appearing on distant broadcast signals retransmitted by cable operators pursuant to the cable statutory license; and offered my views on how cable operators are likely to value non-network programs as shown on distantly retransmitted broadcast signals in a hypothetical market where the cable statutory license does not exist. *See* Hamilton WDT at 4-15. I ultimately concluded, based on my experience working in the cable industry, that actual subscriber

viewing information would be the most reasonable metric for determining the relative market value of distant signal programming in such a hypothetical, unregulated market. *See id.* at 14-15.

Following the submission of my Written Direct Testimony in this proceeding, Program Suppliers asked me to review the Written Direct Testimony of James M. Trautman and the attached report prepared by Bortz Media & Sports Group, Inc. (“Bortz”), entitled *Cable Operator Valuation Of Distant Signal Non-Network Programming: 2010-2013* (the “Bortz Report”), and the Written Direct Testimonies of Allan Singer and Daniel M. Hartman, all of which were submitted by the Joint Sports Claimants (“JSC”). Program Suppliers also asked me to review the Written Direct Testimony of Dr. Gregory Crawford, which was submitted by the Commercial Television Claimants (“CTV”) and the Written Direct Testimony of Howard Horowitz, which was submitted by Program Suppliers (“Horowitz WDT”). After reviewing all of the testimony referenced above, the opinions that I expressed in my direct testimony regarding the importance of actual subscriber viewing information for determining the relative market value of distant signal programming in an unregulated market remain unchanged.

## **II. PURPOSE OF REBUTTAL TESTIMONY**

Based on my experience as a CSO, including my experience making programming decisions for cable systems, I disagree with JSC witnesses Trautman, Singer, and Hartman that the Bortz Report offers a reasonable basis for determining the market value of distant signal programming in this proceeding. While I believe that the Horowitz



survey represents an improvement over the Bortz survey, neither the Bortz nor the Horowitz survey should be seen as more reliable than actual subscriber viewing in determining the relative market value of distant signal programming. I also disagree with the views expressed by JSC witnesses Singer and Hartman regarding the value of distant signal sports programming to CSOs, and several of the presumptions made by CTV witness Dr. Crawford regarding how CSOs would value distant signal programming.

The purpose of my rebuttal testimony is to (1) provide a brief recap for the Judges regarding how CSOs make programming decisions; (2) explain why the Bortz survey does not provide reliable information regarding the value of distant signal programming, and why the Horowitz survey, although an improvement over the Bortz survey, cannot replace reliance on subscriber viewing data; (3) respond to Singer's and Hartman's statements regarding the value of distant signal sports programming to CSOs; and (4) explain why I disagree with the presumptions regarding CSO behavior that underlie Dr. Crawford's analysis, especially with regard to how CSOs would value so-called "duplicate minutes" on distant broadcast signals.

### **III. PROGRAMMING SELECTION DECISIONS AT CABLE SYSTEMS**

As I explained in my direct testimony, industry consolidation over the years has had a significant impact on the way cable operators make decisions about the selection of the cable networks and the broadcast stations they choose to carry. In my experience, during 2010-13, virtually all major CSOs had a centralized hierarchy in place requiring senior-level management to approve channel line ups for all cable systems within the CSO, regardless of geography. Programming decisions were no longer made at the

individual system level, but instead made at a regional or national level (albeit with input from local systems when relevant).

My programming decisions as a CSO were designed to select the cable networks and broadcast stations that I thought would best contribute to subscriber attraction and retention for my cable systems. In order to make that determination, the factors I considered were (1) actual and/or projected subscriber viewing behavior, (2) legacy carriage, (3) whether carriage of a particular network or station was necessary due to bundling of stations by content providers, and (4) cost to my cable system for acquiring the network or station in terms of my overall programming budget. Each of these factors was explained in detail in my direct testimony.

#### **IV. THE BORTZ SURVEY DOES NOT PROVIDE RELIABLE INFORMATION REGARDING THE VALUE OF DISTANT SIGNAL PROGRAMMING.**

I have several overarching criticisms of the Bortz survey which, taken together, lead me to conclude that the survey does not provide reliable information regarding the relative market value of distant signal programming to CSOs. These criticisms fall into three general categories. *First*, the majority of the individuals that Bortz surveyed are not the persons truly responsible for making signal carriage decisions for the cable system, and are thus not in a position to answer the questions that are presented as a part of the Bortz survey. *Second*, in my opinion, the Bortz survey is flawed because it asks CSOs to assign value in a way that is inconsistent with how CSOs typically make programming decisions for their cable systems. *Third*, in my opinion, the Bortz survey's structure is unreasonable, as it invites CSOs to overvalue JSC programming. While some of my

criticisms apply equally to the Bortz survey and the Horowitz survey, if the Judges decide to rely on a survey of CSOs, the methodological changes made by Horowitz were positive changes that improve its reliability.

**A. Many Bortz Respondents Were Not In A Position To Answer The Questions Presented.**

According to the Bortz Report, Bortz survey respondents were initially identified in advance from “industry sources” as the person most likely to have responsibility for carriage decisions at the cable system, and then asked to self-confirm as a part of their Bortz survey interview that they were the person at the system “most responsible for carriage decisions made” by the system. *See* Bortz Report at 22. The job titles for the different individuals who responded to the Bortz survey, quantified by the number of respondents with that job title, are identified in the Bortz Report in Table II-4. I have included a copy of that table below.

Table II-4.  
Persons Most Responsible for Programming Carriage Decisions,  
By Job Title, 2010, 2011, 2012 and 2013

Job Title	2010		2011		2012		2013	
	Number of Respondents	Percent of Total	Number of Respondents	Percent of Total	Number of Respondents	Percent of Total	Number of Respondents	Percent of Total
General Manager, Area VP/Regional VP/District VP/President, CEO or Owner	46	28.2%	42	26.1%	44	25.9%	63	39.4%
Marketing Director/Mgr./Specialist; VP Marketing, Regl. Marketing Dir./Mgr.	72	44.2%	68	42.3%	77	45.3%	48	30.0%
Video Product Dir./Mgr./Sr. Dir./VP, Regl. Dir./VP Content	26	16.0%	12	7.5%	19	11.2%	20	12.5%
VP	4	2.5%	7	4.3%	5	2.9%	15	9.4%
VP/Director/Mgr. of Programming	6	3.7%	14	8.7%	18	10.6%	7	4.4%
VP or Dir. Sales & Marketing/Regl. Dir. Sales & Marketing	6	3.7%	11	6.8%	2	1.2%	0	0.0%
Dir. Competitive Intelligence	0	0.0%	4	2.5%	0	0.0%	0	0.0%
Other	3	1.8%	3	1.9%	5	2.9%	7	4.4%
<b>Total</b>	<b>163</b>	<b>100.0%</b>	<b>161</b>	<b>100.0%</b>	<b>170</b>	<b>100.0%</b>	<b>160</b>	<b>100.0%</b>

While some of the individuals who responded to the Bortz survey had job titles that, in my experience, would typically be associated with an individual responsible for

making signal carriage decisions, in every one of the 2010-13 cable royalty years a large number of the Bortz survey respondents had job titles that were associated with marketing, rather than programming or senior management. In fact, over the four-year span, the Bortz survey was administered to more respondents with marketing-related job titles than any other one category of job title. Collectively, Bortz survey respondents with marketing-related titles make up 47.9% of the Bortz survey respondent population in 2010, 49% in 2011, 46.5% in 2012, and 30% in 2013. In my experience working as a CSO, individuals with marketing job titles at particular systems were not typically responsible for making signal carriage decisions. Instead, marketing specialists would be expected to manage marketing and advertising of the CSO's services to existing and potential customers (including not only video offerings but telephone and high-speed data services as well), and would work with CSO corporate and regional marketing executives to execute specific marketing tactics identified at the national and regional levels, including campaigns funded by cable networks. Indeed, as I described in my direct testimony, signal carriage decisions were typically made at a regional or national level, and not made at the local cable system level. Accordingly, it appears that a large number of Bortz survey respondents each year were not actually in a position to answer the questions presented in the Bortz survey for many of the cable systems surveyed.

**B. The Bortz Survey Is Inconsistent With The Way CSOs Actually Make Carriage Decisions.**

As I explained in my direct testimony, CSOs select signals to carry on their systems in their entirety, either individually or as a part of a bundle of signals. CSOs do

not make distant signal carriage decisions based on individual programs, or genres of programming, and are not typically engaged in an analysis of their relative market value. Moreover, to the extent that CSOs have an understanding of particular programming genres, a CSO's understanding of these program genres is unlikely to be consistent with the eight nuanced program categories that the Judges adopted for use in this proceeding. *See* Hamilton WDT at 8-12. This is especially true in the case of sports programming.

In my opinion, given the fact that CSOs do not typically engage in assigning relative value to the particular programming categories at issue in this proceeding, it is unrealistic to expect a Bortz survey respondent to mentally unbundle both its various content bundles and the signals that comprise them and then reorganize them into the technical programming categories used by Bortz, all within the span of a 10-15 minute telephone call. Bortz survey respondents are being asked to perform a mental valuation exercise in a very short time that is inconsistent with the way that they actually make programming decisions on a regular basis. Moreover, given that CSOs are very busy professionals, and they have no real incentive to be accurate with their responses, it is very likely that the CSO respondents would simply rush through the survey without taking the time necessary to carefully consider the parameters of the nuanced program categories at issue for this proceeding and how those parameters may impact their survey valuations. In my experience, a CSO responding to a market research survey like the Bortz survey would be more concerned with completing the exercise quickly than with the quality of his or her responses.

The technical nature of the program categories adopted for this proceeding further complicates the valuation exercise expected of Bortz survey respondents. For example, as I stated in my direct testimony, a CSO would typically not understand “sports” programming as limited to only live team sports, and would also consider other sporting activities, such as golf, tennis, NASCAR racing, and the Olympics, as falling within the “sports” genre. The Bortz survey failed to clarify this distinction in its questionnaire, as it did not offer separate valuation categories for live team sports and other, non-team sports, or provide programming examples to help the CSO respondents form an understanding of what programs fall within the different programming categories. In my opinion, this lack of clarity impedes the reliability of the Bortz survey results.

### **C. The Bortz Survey Invites CSOs To Overvalue JSC Programming**

Not only does the Bortz survey fail to make a clear distinction between live team sports and other non-team sports as discussed above, the Bortz survey also fails to provide information regarding the quantity of distant signal programming that is available for each of the programming categories (other than to a limited extent in the case of WGNA-only systems).<sup>1</sup> This information would have better enabled CSO respondents to distinguish the non-network, distant signal programming that they were being asked to evaluate in the context of the Bortz survey from other programming that is not compensable under the statutory license, such as network programming and programming that appears on cable networks.

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<sup>1</sup> Although Bortz provided a document summarizing the compensable programming on WGNA to respondents at WGNA-only systems that fell within the Bortz sample, I understand that Cable Data Corporation has determined that WGNA-only systems average only approximately 28.25% of all Form 3 cable systems who filed statements of account with the Copyright Office for the 2010-13 cable royalty years.

The Bortz survey's failure to provide this volume information is particularly problematic in the case of live team sports. As I explained in my direct testimony, over the years there has been a substantial migration of live team sporting events from over-the-air broadcast signals to national cable networks such as ESPN, cable sports channels owned and operated by different sports teams, leagues, and conferences, other regional sports networks ("RSNs"), and general interest cable networks such as TNT and TBS. *See* Hamilton WDT at 12-13. Although cable operators typically attach a high value to live team sports programming carried by their systems, the vast majority of that programming had migrated to cable networks by the 2010-13 time period, leaving only a very small amount of non-network, live team sports programs available via distant signals.

CSOs typically allocate a substantial amount of their programming budget for the acquisition of bundles containing cable sports networks. In contrast, CSOs spend only a very small fraction of their programming budget on the acquisition of distant signal programming, and a very small portion of that distant signal programming volume (less than 1%) actually contains non-network, live team sports that fall within the JSC category.<sup>2</sup> By failing to provide CSO respondents with information regarding the amount of non-network, live team sports programming actually available on distant signals, and then failing to provide a separate category for other sports programming to eliminate confusion, the Bortz survey was structured in a manner than would invite CSOs to

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<sup>2</sup> I understand that Dr. Jeffrey Gray determined JSC's percentage share of compensable retransmissions on his sample stations to be 0.16% in 2010, 0.18% in 2011, 0.12% in 2012, and 0.21% in 2013, and JSC's share of all distant signal volume to be 0.66% in 2010, 0.70% in 2011, 0.49% in 2012, and 0.73% in 2013. *See* Gray Amended and Corrected WDT at 16.

overvalue JSC programming at the expense of other programming categories. In my opinion, these defects impede the reliability of the Bortz survey.

**D. While Not A Substitute For Actual Measured Viewing, The Horowitz Survey Is Better Than The Bortz Survey.**

I understand that Program Suppliers commissioned the Horowitz survey in an effort to improve upon the Bortz survey through several modifications, which are addressed in the Written Direct Testimony of Howard Horowitz. *See* Horowitz WDT at 4-12. Because the Horowitz survey is similar in many ways to the Bortz survey, some of my criticisms of the Bortz survey also apply to the Horowitz survey. For example, both the Bortz survey and the Horowitz survey are brief, telephonic surveys that ask CSO respondents to provide relative market valuations among categories of programming that is inconsistent with the network-based decisions made by CSOs. As with Bortz, the Horowitz survey respondents also included a number having marketing-related titles.

However, modifications were made to the methodology and approach of the Horowitz survey which, in my opinion, makes it an improvement over the Bortz survey. For example, although Horowitz did not provide CSO respondents with volume information for the different programming categories, they did provide representative examples for several of the program categories on their questionnaires and broke out other, non-team sports into a separate category for valuation.

These changes represent a substantial improvement to the Bortz methodology, as they provide greater context for survey respondents and mitigate the tendency to overvalue JSC programming that I believe underlies the Bortz survey. However, my



opinion that subscriber viewing information would be the most reasonable metric for determining relative market value of distant signal programming in a hypothetical, unregulated market, remains unchanged. Neither the Bortz survey nor the Horowitz survey should be viewed as a substitute for such viewing information.

**V. JSC WITNESSES SINGER AND HARTMAN OVERSTATE THE VALUE OF NON-NETWORK DISTANT SIGNAL LIVE TEAM SPORTS PROGRAMMING.**

Program Suppliers also asked me to review the Written Direct Testimonies submitted by JSC witnesses Allan Singer and Daniel M. Hartman. Mr. Singer has experience working as a CSO, including experience working at Charter. Mr. Hartman has experience working as a satellite carrier, including experience working for DirecTV. However, both Singer and Hartman provide very generalized testimony of the value of sports programming to CSOs and satellite carriers, and state that, in their opinion, the Bortz survey results regarding live team sports programming are consistent with the high licensing fees that sports programming commands in the cable network marketplace. They also both endorse the Bortz survey as a reasonable means of determining the relative market value of live team sports programming for purposes of this proceeding. While I agree with Singer and Hartman that live team sports programming is popular with cable subscribers and that such programming has value to CSOs, I disagree with them that the Bortz survey provides an accurate reflection of the value to CSOs of *out-of-market, non-network, live team sports* programming on distant broadcast signals.

As I explain above, non-network, live team sports programming on distant broadcast signals represents less than 1% of the volume of compensable programming at

issue in this proceeding. *See supra* at 9, n.2. While Singer and Hartman emphasize the value of live team sports programming to CSOs, neither acknowledges the fact that live team sports comprise such a small portion of the total distant signal volume. It is very unlikely that Bortz survey respondents would have understood the very limited volume of programming attributable to the live team sports category without being provided with that information prior to being interviewed. Singer and Hartman both fail to take this volume consideration into account.

Singer and Hartman also fail to acknowledge that the program category definitions adopted for these proceedings are very technical and nuanced, and not necessarily consistent with CSOs' typical understanding of programming genres. In my experience, without information explaining the limited scope of the programming that falls within the live team sports category for purposes of this proceeding, CSOs would be unlikely (and perhaps even unable) to make a mental distinction between the particular JSC-represented sporting events and other sports, such as golf, tennis, and the Olympics, when asked to provide a valuation of the programming categories. Neither Singer nor Hartman attempt to address this very significant disconnection between the cable industry understanding of "sports" and the way that programming is referenced in the Bortz survey.

Finally, while they speak at length regarding the general value of live team sporting events to CSOs, neither Singer nor Hartman addresses the significant migration of live team sporting events from broadcast television to cable networks such as ESPN and RSNs that has occurred for the last two decades. The impact of such migration has

been significant, and has resulted in fewer compensable live team sports on broadcast television. Based on my experience in the industry, I fully expect that the migration will continue. Neither Singer nor Hartman provide an explanation for why the Bortz survey valuations for the live team sports category have remained constant over time, while the volume of distant signal, non-network programming actually attributable to that category has migrated to the non-compensable cable network platform over time. Based on my industry experience, I see this trend as evidence that the Bortz respondents did not understand what content they were being asked to evaluate and the context of it when responding to the survey.

#### **VI. CTV'S DUPLICATE MINUTE ANALYSIS HAS NO BASIS.**

I was also asked to review the Written Direct Testimony of CTV witness Dr. Gregory Crawford. Dr. Crawford, who has no experience as a CSO, makes several assumptions regarding how CSOs would value programming. As discussed below, some of Dr. Crawford's assumptions are inconsistent with my experience as a CSO.

For example, in his analysis, Dr. Crawford assigns a zero value for so-called "duplicated network programming minutes." According to Dr. Crawford, duplicated network programming minutes occur when the programming carried on distant broadcast stations duplicates the programming carried on local broadcast stations due to network affiliation of multiple stations with the same network. *See* Crawford WDT at 41-42 (providing an example of a Charter system serving Coldwater, Michigan that both carries its local PBS affiliate WKAR-DT and also imports the South Bend, Indiana distant PBS station WNIT-DT). Dr. Crawford assumes that distant signal programming that "duplicates"

programming airing on the local station “is likely to have no value to cable operators.” *See* Crawford WDT at 41. To cure this supposed duplication issue, for his regression analysis, Dr. Crawford assigns a zero value to these so-called duplicate programming minutes. I disagree with Dr. Crawford’s assumption, as it is inconsistent with my experience as a CSO.

Dr. Crawford’s decision to assign a zero value to duplicated distant signal programming ignores the value that CSOs would likely attribute to that programming in terms of attracting and retaining subscribers. Despite being duplicative, all programming has a value greater than zero to a CSO – a program might be watched by different constituencies on different channels, or watched more than once by an individual at different times on different channels. Moreover, time-shifted programming would be highly attractive for a subscriber unable to watch or record a program during an earlier airing. Dr. Crawford’s assumption that some distant signal programming would have a zero value to CSOs ignores the positive impact of viewing options to consumers.

Dr. Crawford’s analysis also ignores the inertia surrounding the continued carriage of distant signals by incorrectly presuming that active CSO decision-making is occurring annually with regard to distant signal carriage. As I explained in my direct testimony, CSOs do not always make distant signal carriage decisions on an annual basis. Instead, in my experience, distant signal carriage decisions are made every few years, typically coinciding with the retransmission consent election cycle. Moreover, because distant signal carriage represents only very small fraction of a CSO’s typical programming budget, distant signal carriage is not a material expenditure for CSOs. In addition, as I

discussed in my direct testimony, in my experience, legacy distant signal carriage is often retained by a CSO because, from a cost-benefit perspective, it is safer than dropping the carriage. It is very difficult for any cable system to drop any channel (especially a channel that it has been carrying for a long time), and run the risk of losing subscribers over the decision to drop the station. The cost of losing even a single customer can be many thousands of dollars in lost revenue and ongoing enterprise value. At base, Dr. Crawford's focus on annual statutory license fees paid for distant signal carriage as a means of determining relative value is inconsistent with my understanding of how CSOs actually make distant signal carriage decisions.

## **VII. CONCLUSION**

Thank you for the opportunity to present this information in this proceeding. I hope that it will assist you in your deliberations.

**DECLARATION OF SUE ANN R. HAMILTON**

I declare under penalty of perjury that the foregoing testimony is true and correct,  
and of my personal knowledge.

Executed on September 13, 2017

  
Sue Ann R. Hamilton

Jeffrey Gray, Ph.D.

Before the  
COPYRIGHT ROYALTY JUDGES  
Washington, D.C.

*In re*

DISTRIBUTION OF CABLE  
ROYALTY FUNDS

DOCKET NO. 14-CRB-0010-CD  
(2010-13)

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REBUTTAL TESTIMONY OF JEFFREY S. GRAY, PH.D.

September 15, 2017



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## I. INTRODUCTION

1. I, Jeffrey Gray, am an economist and President of Analytics Research Group, LLC. I provided initial testimony in this proceeding, which was filed on December 22, 2016 (“Gray WDT”), amended on March 9, 2017, and corrected on April 3, 2017. A description of my background and experience, as well as a copy of my *curriculum vitae*, was included with that testimony.

2. I understand that the purpose of this proceeding is to allocate the 2010, 2011, 2012, and 2013 cable royalty funds (“2010-2013 Cable Royalties”), paid by Cable System Operators (“CSOs”) under statutory licenses established by Section 111 of the Copyright Act (“Section 111”), among broad self-organized claimant group categories.<sup>1</sup> In my initial testimony, I provided what I believe to be a sound, reliable methodology to estimate what the relative market value of distantly retransmitted programming would be in an unregulated market. I performed calculations to determine this relative market value on a *program-by-program* basis, and then summed these individual relative market values to determine the relative market value of programming by each agreed-upon program category.<sup>2</sup>

3. I have been asked by the Program Suppliers claimant group to respond to the amended and corrected written direct testimonies of Drs. Gregory S. Crawford, Mark A. Israel, Lisa M. George, and Christopher J. Bennett.

4. Drs. Crawford and Bennett provided testimony on behalf of the Commercial Television Claimants (“CTV”); Dr. Israel, on behalf of the Joint Sports Claimants (“JSC”); and Dr. George, on behalf of the Canadian Claimants Group (“CCG”);

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<sup>1</sup> Historically, for cable Phase I Proceedings there have been eight broad categories of programming: (1) Program Suppliers; (2) Joint Sports Claimants (“JSC”); (3) Commercial Television Claimants (“Commercial Television”); (4) Public Television Claimants (“Public Television”); (5) Devotional Claimants (“Devotionals”); (6) Canadian Claimants Group (“Canadian Claimants”); (7) Music Claimants; and (8) National Public Radio (“NPR”). The Judges adopted these eight categories of programming for this proceeding as well. See Notice of Participant Groups, Commencement of Voluntary Negotiation Period (Allocation), and Scheduling at Exhibit A (November 25, 2015) (“Notice”).

<sup>2</sup> Gray WDT.

describing alternative distribution methodologies with correspondingly alternative proposed royalty share allocations.<sup>3</sup>

5. I understand that the Program Suppliers have asked Dr. Joel Steckel and Mr. Howard Horowitz to respond to the written direct testimony of Mr. James M. Trautman, who has submitted results from a survey of CSOs, the “Bortz Survey,”<sup>4</sup> to assess the relative market value of programming at issue in this proceeding. I also provide my opinion on the usefulness of surveying CSOs in this context, as well as the relative usefulness of the Bortz Survey results and the survey results from an alternative survey overseen by Mr. Horowitz. Finally, my testimony includes comments on the written direct testimony of Dr. Erkan Erdem, who provided testimony on behalf of the Settling Devotional Claimants (“Devotionals”).<sup>5</sup>

6. My testimony is based upon information currently available to me. I reserve the right to supplement this testimony should additional information be made available.

## II. SUMMARY OF OPINIONS

7. For the reasons set out below, my conclusions regarding calculating the relative market value of programming described and reported in my initial testimony are unaltered by written direct testimony submitted on behalf of CCG, CTV, JSC, or the Devotionals.

8. Necessary modifications made to the regression models proposed by opposing parties’ experts to reflect the regulated structure of 2010-2013 royalty payments made by

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<sup>3</sup> Testimony of Gregory S. Crawford, PhD, Corrected April 11, 2017 (“Corrected Crawford WDT”); Testimony of Christopher J. Bennett PhD, Corrected April 11, 2017; Written Direct Statement of Lisa M. George PhD, Corrected May 17, 2017 (“George WDT”); Written Direct Testimony of Dr. Mark A. Israel, December 22, 2016 (“Israel WDT”); Written Direct Testimony Michelle Connolly, Ph.D., December 22, 2016.

<sup>4</sup> See *In the Matter of Distribution of the 2010, 2011, 2012, and 2013 Cable Royalty Funds*, Written Direct Testimony of James M. Trautman (Dec. 22, 2016), *attachment*: Bortz Media & Sports Group, Inc., Cable Operator Valuation of Distant Signal Non-Network Programming: 2010-2013 (Dec. 22, 2016).

<sup>5</sup> Testimony of Erkan Erdem, Ph.D., March 9, 2017 (“Erdem WDT”).

CSOs demonstrate that the regression results do not support the Bortz Survey results, and therefore do not support the royalty allocations suggested by the Bortz Survey.

9. Dr. Israel's analysis of large cable system's programming expenditures and Dr. Crawford's comments on the importance of programming heterogeneity are not relevant to CSO's carriage choices concerning distant signals and should not be considered in how to distribute royalties paid by CSOs to copyright owners.

10. Neither the Bortz Survey nor the Horowitz Survey provides a reasonable basis for measuring marketplace value. However, the Horowitz Survey is superior to the Bortz Survey as it corrects for some of the Bortz Survey's major flaws.

### **III. REGULATED FEES REGRESSION ANALYSES**

11. Drs. Crawford and Israel used multiple regression analyses to calculate royalty shares for each claimant category for 2010-2013. Dr. George used multiple regression analyses to calculate royalty shares only for the CCG claimant category for 2010-2013. Multiple regression analysis calculates the individual influences that each of a set of independent (or explanatory) variables has on a specific variable chosen to study. The variable chosen to study is known as the dependent (or outcome) variable.

12. Table 1 below presents a summary of Drs. Crawford's, Israel's and George's regression methodologies and the data they relied upon to calculate their recommended royalty share allocations. In each of their regression models, the outcome variable is some form of the regulated royalty fees paid by CSOs. As detailed in Appendix A, the explanatory variables differ among the models, but both Dr. Crawford and Dr. Israel's regression models included total minutes of programming, or program volume, by each claimant category; whereas, Dr. George's explanatory variables included CCG programming minutes, JSC programming minutes, and Program Suppliers/Devotionals programming minutes, where Program Suppliers/Devotionals minutes is the sum of Devotional program minutes and Program Suppliers minutes. Because each multiple

regression model analyzes how a set of explanatory variables influences a regulated royalty fees, I refer to these three models as “regulated fees regressions.”

<b>Table 1: Summary of Regulated Fees Regressions</b>			
<i>Claimant Group's Expert</i>	<i>Crawford CTV</i>	<i>Israel JSC</i>	<i>George CCG</i>
<i>Outcome Variable Analyzed</i>	Natural Logarithm of Royalty Fees Paid	Royalty Fees Paid	Royalty Fees Paid
<i>Number of Explanatory Variables in Final Model*</i>	22	20	24
<i>Data: Form 3 CSO Royalty Fees Analyzed</i>	All CSOs in U.S.	Sample of CSOs in U.S.	Sample of CSOs with retransmissions in “Canadian Region” in U.S.**
<i>Number of Observations in Final Model</i>	26,126	5,465	2,198
<i>Calculated Royalty Shares</i>	All Claimant Groups	All Claimant Groups	CCG Claimants
*A list of the explanatory variables in the three final models is included in Appendix A.			
**See George WDT, p. 51 for definition of Canadian Region.			

13. The regulated fees regressions attempt to estimate how an additional minute of retransmitted programming, by claimant category, impacted the royalty fees paid by CSOs. None of the three regulated fees regressions estimate how prices would be determined, or even influenced by factors in a free, unregulated, market. Royalty fees paid by CSOs under Section 111 are set by statute and determined by the CSO's number and type of distant signal equivalents and gross receipts. They are not determined by the number of minutes of programming, or minutes by program category type, carried on the retransmitted signals.

14. CSO royalty payments are set by a *compulsory* license and Drs. Crawford, Israel, and George offer no evidence that such payments have any bearing on a CSO's willingness to pay for retransmitted signals. For example, CSOs with subscribers who place *no* value on the programming carried on retransmitted signals are still required to pay a mandated minimum royalty fee. In such circumstances, a regression analysis that

examines the relationship between the type of programming on those signals and the mandated CSO royalty fees paid, by construction, would generate non-probative (and potentially nonsensical) insights into the relative market value of programming carried on distantly retransmitted signals.

15. CSOs' mandatory minimum royalty fees requirement is not a theoretical curiosity. Actual choices made by CSOs concerning which, if any, broadcast signals to retransmit from 2010 through 2013 demonstrated that CSOs' regulated royalty payments often provided no information regarding how much CSOs may have valued their distantly retransmitted signals over those royalty years. Consequently, there is no economic justification to estimate their relative market value based on the regulated fees paid by all CSOs.

16. Each royalty year there are two accounting periods at the end of which CSOs are required to file Statements of Account ("SOAs") with the Licensing Division of the Copyright Office. These SOAs include information on the CSOs' gross receipts, which signals they distantly retransmitted, and the statutorily set royalty fees due as result of these retransmissions. In the 2010 to 2013 cable royalty years, CSOs could report royalties at the subscriber group level, defined as sets of communities that receive the same portfolio of distant broadcast signals.<sup>6</sup>

17. Each accounting period from 2010-2013, there averaged 1,004 Form 3 CSOs that paid royalties ostensibly giving the CSOs the right to retransmit stations on a distant basis. However, of these 1,004 CSOs, 527 chose to retransmit the exact or fewer number of signals than their regulated minimum fee allowed. Thus, these 527 CSOs' decisions did not impact their costs and their retransmission choices, and did not provide information regarding their willingness to pay for the right to retransmit the signals they chose. During the 2010-2013 period, 83 CSOs, on average, despite paying the regulated

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<sup>6</sup> This resulted from the enactment of Satellite Television Extension and Localism Act of 2010.

minimum fee allowing them to distantly retransmit signals, chose not to retransmit any signals at all during each accounting period.

18. To the extent one wishes to rely on the statutorily-determined CSO payments at all, it is only when a CSO retransmitted more signals and/or type of signals than its regulated required minimum fee allowed that there may be some information in the royalty fees paid. The reason is that only in those cases did the CSO's decision incur an incremental cost to the CSO's regulatory set minimum fee requirement. While the increased regulatory cost for these CSOs was also set by statute, the incremental cost incurred does suggest an increased willingness to pay for the distantly retransmitted programming. This situation, where CSOs' retransmission choices incurred a royalty fee greater than their statutorily set minimum, occurred for 477 CSOs, on average, each accounting period, or 48% of all CSOs over the 2010-2013 royalty years.

19. As described in detail below, restricting Drs. Crawford's, Israel's, and George's regression analyses to those CSO choices where there may be some information regarding CSOs' willingness to pay for retransmissions has a significant impact on their findings, and therefore their recommended royalty allocations.

**A. *Crawford's Regulated Fees Regression***

20. Dr. Crawford's regulated fees regression examined the relationship between the natural log of the royalty fees and the minutes of programming of the claimant categories carried on distant broadcast signals *within* a given subscriber group and accounting period. He included in his regression model other explanatory variables he believes might impact the royalty fees paid by CSOs.<sup>7</sup> By performing calculations within subscriber groups, Dr. Crawford attempted to measure how a CSO's selection of stations to retransmit to its subscriber groups impacted its calculated royalty fees attributed to that subgroup in the SOA. According to this logic, the greater the calculated royalty fees

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<sup>7</sup> See Corrected Crawford WDT, Section VI.B. for a detailed discussion of his regression model. A list of explanatory variables in Dr. Crawford's model is included in Appendix A in this testimony.

based on stations retransmitted to subscriber groups, the greater the value of the station to the CSO. However, this logic fails when these calculated royalty fees do not exceed the CSO's required minimum fees.

21. Table 2 below presents an example of a CSO, whose calculated royalty fees were less than its required minimum fees, demonstrating the flaw in Dr. Crawford's logic and therefore his regulated fees regression methodology. In the second accounting period of 2010, Time Warner Cable NYC, a CSO in Bethel NY (CSO ID #NYN560), had gross receipts of \$12,312,524 with an associated regulated minimum royalty fees requirement of \$131,005. However, the final column reports that calculated royalty fees at the subscriber group level totaled only \$93,152, or \$37,854 *less than* the CSO's minimum fee requirement. Thus, the CSO could have retransmitted additional signals distantly and/or redistributed the stations it did retransmit across subscriber groups at no additional cost. This means that calculated subscriber group royalty fees reported in the final column do not measure, or provide any information regarding, the extent to which this CSO valued the signals it distantly retransmitted.



**Table 2: Example of a CSO's calculated royalty fees being lower than the required minimum (and paid) royalties of \$131,005. CSO ID #NYN560, Accounting Period 2010/2.**

<i>Subscriber Group</i>	<i>Gross Receipts</i>	<i># Distant Stations</i>	<i>Calculated Royalty Fees</i>
1	4,609,922	0	0
2	586,710	3	4,682
3	1,031,164	0	0
4	286,048	3	2,283
5	266,536	3	2,127
6	628,591	4	6,688
7	305,754	3	2,440
8	5,974	17	312
9	187,201	4	1,992
10	26,807	4	465
11	63,926	5	1,279
12	35,132	5	435
13	1,553,698	3	12,399
14	381,756	4	4,062
15	1,305,301	4	22,654
16	108,209	3	864
17	42,103	16	6,383
18	494,166	4	5,258
19	229,916	3	1,835
20	147,851	15	16,869
21	15,758	3	126
<b>CSO TOTAL</b>	<b>\$ 12,312,524</b>	<b>106</b>	<b>\$ 93,152</b>

22. Yet the Crawford regulated fees regressions relied upon these calculated subscriber group royalty fees to estimate the relative market value to CSOs of programming on distantly retransmitted signals. When these fees are not a binding, or incremental cost, the data simply do not inform the extent to which the CSO might be willing to pay to retransmit individual stations. With these royalty fees data, it is not possible to gauge the value of programming carried on those retransmitted stations to the CSO. Dr. Crawford's proposed royalty share allocations are therefore unreliable.

23. However, as I described earlier in paragraph 15 above, approximately half of CSOs chose to distantly retransmit a quantity and type of broadcast signals that caused their royalty fees paid to be greater than their statutorily mandated minimum fees over

2010-2013. For these CSOs, changing which or how many broadcast stations they retransmitted to each of their subscriber groups did impact the CSOs' costs. Applying Dr. Crawford's regulated fees regression analysis to this subset of CSOs could provide some information regarding the relative market value of the programming category types carried on the retransmitted signals. I do so in Table 3 below.

24. Column 1 in Table 3 below presents the average royalty shares over 2010-2013 based upon my attempted replication of Dr. Crawford's described regulated fees methodology to all CSOs. Column 2 presents each claimant category's calculated royalty shares applying Dr. Crawford's regulated fees regression methodology to the subset of CSOs who paid more than the minimum royalty fees, where adding or dropping retransmitted stations to subscriber groups would impact the CSOs' royalty fees paid, or cost. Column 3 shows my recommended allocation of 2010-2013 royalties which I present in my direct testimony.

<b>Table 3: Impact of accounting for minimum fees requirement on Crawford royalty shares, 2010 – 2013</b>			
<i>Claimant Category</i>	<i>(1) Crawford Royalty Shares</i>	<i>(2) Crawford- Modified Royalty Shares</i>	<i>(3) Distant Viewing Royalty Shares</i>
CCG	3.51%	5.46%	3.70%
CTV	16.50%	13.54%	13.50%
Devotionals	0.60%	0.75%	1.44%
Program Suppliers	23.44%	61.19%	45.43%
PTV	17.72%	19.06%	33.04%
JSC	38.23%	0.00%	2.89%

25. Table 3 shows that while CTV's calculated royalty share drops from 16.50% to 13.54% when applying Dr. Crawford's model to the subset of relevant CSOs, the most dramatic changes occur with the Program Suppliers and JSC categories. While JSC's average royalty shares drops 38.23 percentage points to a zero share, Program Suppliers' royalty share increases by 37.75 percentage points to 61.19%.

26. While applying Dr. Crawford's regulated fees model to the subset of relevant CSOs provides a more reliable measure of royalty shares, the model and estimated shares continue to be flawed as they (1) remain based on regulated prices; and (2) are ultimately a volume-based measure. The regulated fees regression does not measure the relative market value of individual programming carried on the retransmitted stations, and thus it cannot provide a reliable measure of the relative market value of aggregated individual programming. That is, the model does not measure which programs, or aggregated groups of programs, are valued by the CSO and its subscribers. In contrast, the distant viewing-based methodology I proposed in my written direct testimony does.

27. Column 3 in Table 3 reports the calculated royalty shares by programming category based on the analysis described in my initial testimony. These viewing-based and modified-Crawford royalty shares are similar in that the ranking order of the top four royalty shares are the same. Remarkably, the modified-Crawford's model suggests royalty shares approximately 16 percentage points higher for Program Suppliers and approximately 14 percentage points lower for PTV over the 2010-2013 royalty years.

## ***B. Israel's Regulated Fees Regression***

### *1. Statistical Imprecision of Israel's Estimates*

28. In his written direct testimony, SDC expert Dr. Erdem criticized Dr. Israel's regulated fees model due to the remarkable sensitivity of its regression estimates to Dr. Israel's choice of which explanatory variables to include. (Erdem WDT, pp. 14-17 and Erdem Exhibits 12-13). Dr. Erdem found that Dr. Israel's implied JSC royalty shares could range from 0% to 63.29% by changing assumptions regarding the choice of explanatory variables or the assumed functional relationship those variables have on royalty fees paid. I agree with Dr. Erdem's implication that Dr. Israel's regulated fee model is unreliable due to the statistical imprecision of his regression estimates.

29. With respect to the statistical imprecision of Dr. Israel's estimates, I have been able to replicate Dr. Israel's results exactly and calculated 95% confidence intervals

around his estimates of the value of an additional minute of programming by claimant category type. I found that Dr. Israel's estimate for the JSC category of \$4.836 per additional minute, as reported in Israel Table V-2 (Israel WDT p. 20), has a 95% confidence interval of \$0.0014 to \$9.671. Dr. Israel's calculated values of an additional minute of programming by claimant category lead directly to his calculated royalty shares. Using the lower bound of the wide, or imprecise, 95% confidence interval results in Dr. Israel's proposed royalty share for JSC to be 0.05%. This royalty share is close to the 0% JSC royalty share Dr. Erdem found in one of his modifications of Dr. Israel's regression model (Erdem Exhibit 13, Model 1A) as well as the 0% share calculated by the modified Crawford model presented in Table 3 above.<sup>8</sup> The imprecision in Dr. Israel's own reported estimates underscores the lack of reliability of Dr. Israel's regulated fees model.

## *2. Impact of Minimum Fees Requirement on Israel Estimates*

30. Dr. Israel's regulated fees regressions examined the relationship between royalty fees paid by CSOs and the minutes of programming by claimant categories carried on the retransmitted signals. As did Dr. Crawford, Dr. Israel included in his regression model other explanatory variables he believed might impact the royalty fees paid by CSOs.<sup>9</sup> However, while Dr. Crawford examined the relationship between the logarithm of regulated fees paid and his set of explanatory variables, Dr. Israel assumes a linear relationship. I agree with Dr. Crawford that studying the natural logarithm of royalties is based on "a more realistic economic assumption for the functional form of the relationship between minutes and royalties" (Crawford par. 114, p. 32). Specifically, examining the natural logarithm of regulated fees paid allows for a non-linear relationship with the explanatory variables used. Using the natural logarithm calculates

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<sup>8</sup> The 0% share calculated by Dr. Erdem is due to the wide confidence interval Dr. Erdem calculated in his modified Israel regression model, Model 1A. Dr. Erdem concluded because the 95% confidence interval includes zero, we cannot reject that the relative value of JSC programming is zero.

<sup>9</sup> See Israel WDT, pp. 12-24 for a detailed discussion of his regression model. A list of explanatory variables in Dr. Israel's model is included in Appendix A in this testimony.

### C. *George's Regulated Fees Regression*

33. Dr. George's regulated fees regression examined the relationship between royalty fees paid by CSOs and programming minutes and other explanatory variables listed in Appendix A. Her rationale for the explanatory variables in her regression fees model is to maintain "consistency and comparability with prior proceedings."<sup>12</sup> Dr. George restricts her regulated fees regression to the "Canadian Region" and only presents an estimate of the relative market value of programming for the CCG category. Dr. George defines the Canadian Region as the portion of the northern United States in which CSOs were permitted to retransmit Canadian signals under the compulsory licenses between 2010 and 2013.<sup>13</sup>

34. I have replicated Dr. George's regression results exactly. Her regression model would imply a CCG royalty share in the Canadian region of 22.05%. In her Table 1a, Dr. George reported that royalties in the Canadian Region totaled \$217,015,916. Thus, according to Dr. George, the value of CCG programming in the Canadian Region equates to  $22.05\% * \$217,015,916$ , or \$47,852,682. Total royalties were \$774,854,063 over 2010-2013. Dr. George therefore concluded that CCG retransmitted programming warrants  $\$47,852,682 / \$774,854,063$ , or 6.18%, of all royalties paid over 2010-2013.

35. Even though Program Suppliers and Devotional programming belong to different agreed-upon claimant categories, Dr. George combines them into a single category for her regulated fees regression analysis. Her regression found that each additional 1,000 minutes of Program Suppliers/Devotional programming on distantly retransmitted Canadian Signals was associated with a \$294 reduction in royalty fees paid. Dr. George then proceeded to calculate that Program Suppliers/Devotional's royalty share from these signals in the Canadian region was *negative* 12.35% (George WDT, Table 3). When

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<sup>12</sup> George WDT, p. 23. She stated that she made minor adjustments to reflect changes in the cable market since the prior proceeding.

<sup>13</sup> As described in her written direct testimony, her definition of the Canadian Region includes areas outside the Canadian Zone where Canadian signals may be retransmitted to include CSOs that moved, at least partially, into the Canadian Zone through merger activity during 2010-2013. George WDT, p. 21.

calculating her CCG royalty share, Dr. George does not adjust her calculation to include only those categories with estimated positive marginal values of programming. That is, rather than treat Program Suppliers/Devotional programming on retransmitted Canadian signals as having no value; she calculated that such programming had *negative* value to CSOs and their subscribers. As a result, her proposed methodology suggested that the Program Suppliers and Devotional claimant categories should *make additional payments* of \$26,801,466 ( $12.35\% * \$217,015,916$ ) into the Canadian Region pool to benefit CCG.

36. Adjusting the George methodology such that the Program Suppliers and the Devotional programming on Canadian signals had zero value to CSOs, rather than penalize those copyright owners for having their programming retransmitted, would imply a 5.50% share for CCG of the overall royalty pool.

37. Aside from its suggestion that Program Suppliers and Devotional claimants contribute additional funds to the royalty pool to benefit CCG claimants, Dr. George's regulated fees regression suffers from similar flaws as do Dr. Crawford's and Dr. Israel's regulated fees regressions. Dr. George does not restrict her regression to analyze the CSO retransmission choices to those choices that were associated with incremental costs. When applying Dr. George's regulated fees model to the subset of CSOs where the regulated fees paid were greater than the minimum amount required by statute, there is not a statistically significant relationship between CCG programming minutes and royalty fees paid in the Canadian region.<sup>14</sup> Thus, one conclusion based on Dr. George's methodology, applied to relevant CSOs, is that CCG's royalty share in the Canadian Region, as well as the entire United States, is 0%. However, because cable subscribers viewed retransmitted CCG programming on a distant basis, I believe there is economic value to the programming. A more reasonable measure of CCG's royalty share corresponds to its programming's share of distant viewing, or 3.70%, on average over the 2010-2013 royalty years.

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<sup>14</sup> See Appendix D for regression results applying Dr. George's model to the subset of CSOs paying greater than their statutorily set minimum.

***D. The Issue of WGN and Non-Compensable Programming***

38. As stated in my direct testimony, I excluded from my analysis of the relative market value of distantly retransmitted programming all programs that aired on WGN's local feed ("WGN") that were not simultaneously broadcast on WGN's national feed ("WGNA") because only simultaneously retransmitted programming is compensable under Section 111. I then proceeded to perform an analysis of the relative market value of each compensable program aired on retransmitted stations, then added up the values of the individual programs into the agreed upon program categories.

39. Dr. Bennett provided an example of compensable as opposed to non-compensable WGN programming. In Bennett Figure 5, reproduced below, only "WGN News at Nine" that aired on WGN and WGNA during the same time slot on January 2, 2010 is defined as compensable. Each other program in Dr. Bennett's example, all Program Suppliers programming, are defined as non-compensable under Section 111.

**Bennett Figure 5. Snapshot of WGN and WGNA airings data**

Time(UTC)	WGNA		WGN	
	Program title	Program runtime	Program title	Program runtime
02:00:00	Barney Miller	30 min	Smallville	60 min
02:30:00	Barney Miller	30 min		
03:00:00	WGN News at Nine	60 min	WGN News at Nine	60 min
04:00:00	Scrubs	30 min	Family Guy	30 min
04:30:00	Scrubs	30 min	Two And A Half Men	30 min

40. Dr. Bennett's example is emblematic of the overall WGN/WGNA non-compensable retransmissions issue. As shown in Table 6 below, approximately 45.9% of all retransmitted minutes from 2010-2013 were non-compensable WGN minutes (42.8% of non-compensable Program Suppliers programming and 3.1% of non-compensable the Devotionals programming). Thus, 93.3% of all retransmitted non-compensable minutes that aired on WGN belong to the Program Suppliers category.

<b>Table 6: Number and Percentage of Retransmitted Minutes by Program Category and Whether Non-Compensable WGN Programming, 2010-2013</b>		
<i>Category</i>	<i>Retransmitted Minutes</i>	<i>% of Total</i>
PS	<b>178,597,872</b>	<b>60.0%</b>
<i>Compensable PS</i>	<i>51,261,616</i>	<i>17.2%</i>
<i>Non-compensable WGN, PS</i>	<i>127,336,256</i>	<i>42.8%</i>
JSC	<b>6,962,722</b>	<b>2.3%</b>
Commercial	<b>19,677,607</b>	<b>6.6%</b>
PTV	<b>18,322,702</b>	<b>6.2%</b>
Devotional	<b>13,585,045</b>	<b>4.6%</b>
<i>Compensable Devotional</i>	<i>4,384,240</i>	<i>1.5%</i>
<i>Non-compensable WGN, Devotional</i>	<i>9,200,805</i>	<i>3.1%</i>
CCG	<b>4,839,825</b>	<b>1.6%</b>
Total	<b>297,631,629</b>	<b>100.0%</b>

41. CSOs, through their subscribers, placed value on *all* programming contained on WGN that were retransmitted – both compensable and non-compensable – insofar as the subscribers viewed the programming on a distant basis. There is no evidence that CSOs discounted the value of WGN at the time they chose to carry the signal because of non-compensable programs. Table 6 above implies that 71.3% of Program Suppliers minutes that were retransmitted (127.3 million/178.6 million) aired on WGN, and are classified as non-compensable retransmissions under Section 111. The vast majority of non-compensable Program Suppliers retransmissions occurred when WGN and WGNA each aired Program Suppliers programming, but aired different titled programs, or different episodes of the same titled program. I understand that this practice of substituting programs was followed by WGN/WGNA for approximately 20 years as part of an effort to make the signal “syndex-proof” by airing programing that would not have to be blacked out due to FCC’s exclusivity rules.<sup>15</sup>

<sup>15</sup> See Written Direct Testimony Of Richard V. Ducey, Docket No. 2007-3 CRB CD 2004-2005, p.6 (June 1, 2009).



42. The magnitude of non-compensable WGN programming is an issue for regression models that calculate the relative market value of programming based on the royalties paid by CSOs. While 45.9% of all retransmitted minutes were non-compensable WGN programming minutes, Table 7 below reports that approximately three quarters of all regulated royalty fees paid over 2010-2013 were ascribable to WGN retransmissions.

<b>Table 7: Royalty Fees Paid Related to WGN Retransmissions and Overall</b>					
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>Total</u>
WGN-DT	122,887,635	131,624,142	138,360,810	146,992,072	539,864,660
All	166,417,620	178,222,399	183,586,451	189,052,747	717,279,217
WGN's % of Total	74%	74%	75%	78%	75%

43. Table 7 cannot be construed as evidence of the value of WGN. Instead, it amplifies the absurdity of trying to accord any significance to WGN based on the royalty fees it purportedly generated. Also, past decision makers have questioned reliance on the “fees-generated” calculation approach both in terms of its efficacy and competing computational approaches.<sup>16</sup> Nevertheless, the importance of WGN’s non-compensable programming to estimating the relative market value of programming can be illustrated by a hypothetical regulated market where all retransmitted programming airing on WGN and WGNA were deemed compensable, whether simultaneously retransmitted or not. I re-estimated Dr. Israel’s original model, with only one change: I included WGN non-compensable programming when calculating royalty shares. This follows the reasoning that subscribers, and therefore their CSOs, value and consume programming without regard to its compensability under Section 111. These results are reported in Column 2 of Table 8 below. For ease of reference, I report again Dr. Israel’s original royalty share calculations and those from my original viewing-based analysis in the adjacent columns.

<sup>16</sup> See *Distribution of the 2000-2003 Cable Royalty Funds*, 75 Fed. Reg. 26798, 26802-05 (May 12, 2010); *Distribution of the 2004-2005 Cable Royalty Funds*, 75 Fed. Reg. at 57063, 57071-73 (September 17, 2015).

**Table 8: Israel Royalty Shares Revisited – the Impact of Non-Compensable Programming, Using Israel’s Data**

<i>Claimant Category</i>	<i>(1) Israel Royalty Shares</i>	<i>(2) Israel Royalty Shares Including N-C Minutes</i>	<i>(3) Distant Viewing Royalty Shares</i>
CCG	0.00%	0.00%	3.70%
CTV	22.16%	13.30%	13.50%
Devotionals	0.00%	0.00%	1.44%
Program Suppliers	26.82%	56.08%	45.43%
PTV	13.48%	8.09%	33.04%
JSC	37.54%	22.63%	2.89%

*Note: percentages may not add up to 100% due to rounding.*

44. When including non-compensable retransmitted WGN programming, Dr. Israel’s original regulated fees model implies that Program Suppliers’ royalty share increases from 26.82% to 56.08% and JSC’s royalty share decreases from 37.54% to 22.63% over 2010-2013. Thus, considering all programming distantly retransmitted by CSOs, Dr. Israel’s model indicates that CSOs value Program Suppliers’ programming more than any other category’s programming, including JSC programming.

45. In addition to the value of both compensable and non-compensable programming to their subscribers, CSOs continued to retransmit WGN for other reasons. Namely, CSOs continued to retransmit WGN due to WGN station owner’s bundling requirements, CSO legacy carriage incentives, and CSO cost considerations.<sup>17</sup> From 1994 through 2010, CSOs were required by WGN’s owner, Tribune Media, to carry WGN if the CSOs were to carry other major in-market network affiliates also provided by Tribune Media. Due to this bundling, many CSOs carried WGN.<sup>18</sup> As described by Ms. Hamilton, once a CSO has carried a station for an extended period, the risk of losing subscriber constituencies disincentivizes them from dropping carriage. Ms. Hamilton refers to this a “legacy carriage” consideration.<sup>19</sup> The legacy carriage consideration is given additional

<sup>17</sup> Hamilton WDT, p. 6-8.

<sup>18</sup> *Ibid.*

<sup>19</sup> *Ibid.*

weight given the small portion of a typical CSO's overall programming budget devoted to distant signal carriage.

*E. The Categorization of Retransmitted Programming*

46. I understand the purpose of this proceeding is ultimately to distribute royalties that have been paid to the Copyright Office for the benefit of the copyright owners, or their representatives, of distantly retransmitted programming. My written direct testimony, as well as the written direct testimonies of the economists I respond to in this testimony, attempt to quantify the share of paid royalties that should be allocated to agreed-upon categories of compensable programming. While the category definitions have been agreed to by the parties involved, and adopted by the Judges, they are not standard categories understood by the market.<sup>20</sup>

47. Nonetheless, to determine category royalty shares it was necessary to assign every program carried by retransmitted signals to one of the party's categories. This task of categorization was carried out by the economics experts, or in the cases of Dr. George and Dr. Crawford, their supporting experts. Dr. George's supporting expert is Mr. Bourdeau and Dr. Crawford's supporting expert is Dr. Bennett. On average, there were over 13 million program retransmissions each year from 2010 through 2013 (Gray WDT, Table 1). Classifying the retransmissions into one of the six agreed upon claimant categories was a significant undertaking requiring reliance on third-party data describing characteristics of each broadcasted program that aired on retransmitted stations.

48. Dr. Israel and I relied upon information in Gracenote data fields, Dr. Bennett relied upon information in the FYI data fields, and Mr. Bourdeau relied upon information in the CRTC logs, to assign individual programs to one of the agreed-upon program categories.

49. An advantage of the FYI database is that Dr. Bennett could acquire information for the entire universe of all US, Canadian, and Mexican signals distantly retransmitted

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<sup>20</sup> See Hamilton WDT p. 8-12.

by CSOs. Dr. Israel and I relied upon random samples stations from the Gracenote data. The Gracenote data maintain different details concerning the programs that aired every day from 2010 to 2013 than does the FYI data.

50. I compared the category classification I made in my initial testimony to Dr. Bennet's, relying upon the approximately millions of programs airing on retransmitted signals each year from 2010-2013. Our categorization algorithms assigned programs to the same claimant category for 93.5% of the broadcasts being retransmitted. For the 6.5% of programs carried on retransmitted signals where our algorithms disagreed, it is difficult to determine which categorization is correct without doing a program-by-program review.

51. To gauge whether there was any bias in my categorization algorithm, or in the Gracenote data I relied upon, I repeated my distant viewing calculations for each royalty year, but replaced my determination of each program's category with that determined by Dr. Bennett relying on the FYI data. Table 9 below presents distant viewing shares by program category and royalty year relying on my classification algorithm described in my initial testimony as well as viewing shares relying upon Dr. Bennett's program classifications.

52. The viewership shares relying upon Dr. Bennett's program classifications are similar, though modestly different from, the viewership shares I reported in the initial testimony and reproduced in Table 5 above. Program Suppliers' viewership shares are higher in each royalty year using Dr. Bennett's classifications, whereas CTV's viewership shares are higher in each royalty year adopting my original classification methodology. This is consistent with no bias in intent on the part of Dr. Bennett or me.

<b>Table 9: Distant Viewing Shares by Royalty Year Using Original Classification and CTV/Bennett Classification</b>			
<i>Year</i>	<i>Claimant Category</i>	<i>Original Classification Share of Distant Viewing</i>	<i>CTV/Bennett Classification Share of Distant Viewing</i>
<b>2010</b>	Canadian Claimants	1.96%	1.14%
	Commercial Television	15.83%	12.70%
	Devotionals	1.18%	1.28%
	Program Suppliers	50.94%	52.74%
	Public Television	27.96%	30.04%
	JSC	2.13%	2.09%
	<b>Total</b>	<b>100%</b>	<b>100%</b>
<b>2011</b>	Canadian Claimants	3.93%	2.77%
	Commercial Television	12.06%	8.70%
	Devotionals	2.44%	2.45%
	Program Suppliers	49.92%	53.72%
	Public Television	29.09%	29.71%
	JSC	2.57%	2.65%
	<b>Total</b>	<b>100%</b>	<b>100%</b>
<b>2012</b>	Canadian Claimants	3.58%	2.77%
	Commercial Television	15.48%	11.48%
	Devotionals	1.07%	1.17%
	Program Suppliers	36.17%	40.66%
	Public Television	41.64%	41.86%
	JSC	2.06%	2.06%
	<b>Total</b>	<b>100%</b>	<b>100%</b>
<b>2013</b>	Canadian Claimants	5.31%	3.72%
	Commercial Television	10.64%	7.95%
	Devotionals	1.09%	1.30%
	Program Suppliers	44.69%	48.59%
	Public Television	33.47%	33.46%
	JSC	4.80%	4.98%
	<b>Total</b>	<b>100%</b>	<b>100%</b>

#### **IV. ADDITIONAL ARGUMENTS BY DRS. CRAWFORD AND ISRAEL**

53. Again, I understand the purpose of this proceeding is ultimately to distribute royalties that have been paid to the Copyright Office for the benefit of the copyright

owners, or their representatives, of distantly retransmitted programming. As described below, Dr. Israel's analysis of large cable system's programming expenditures and Dr. Crawford's comments on the importance of programming heterogeneity are not relevant to CSO's carriage choices concerning distant signals and should not be considered in how to distribute paid royalties to copyright owners.

**A. *Irrelevance of Dr. Crawford's Distant Signal Heterogeneity Analysis***

54. CSOs do not offer individual programs on broadcast stations they retransmit to their subscribers. Nor do CSOs offer individual broadcast stations they retransmit to their subscribers *a la carte*. Instead, as described in my initial testimony, CSOs offer bundled distant signal channels, cable channels, local broadcast channels and pay-per-view channels in different packages to existing and potential subscribers at varying prices.<sup>21</sup> In his written direct testimony, Dr. Crawford described the economic incentive for CSOs to bundle channels with dissimilar programming such as channels devoted to sports, news, and weather programming.<sup>22</sup>

55. I agree with the economic principles described by Dr. Crawford concerning CSOs' incentive to bundle together cables channels with dissimilar programming to maximize revenue in the face of heterogeneous subscriber preferences. However, in this proceeding we are not attempting to estimate the relative market value of a sports cable channel, of a news cable channel, or of a weather cable channel. We are interested in assessing the relative market value of aggregated groups of programming that aired on *broadcast stations* which were distantly retransmitted by CSOs. While the programs that aired on signals had value to subscribers in distant markets, as evidenced by their viewing, I have not seen any evidence to suggest that the type of programming on the distantly retransmitted stations is markedly different from the content currently bundled by CSOs.

56. Testimony by a former CSO executive, with responsibilities that included managing the cable system's programming budget and selecting broadcast stations for

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<sup>21</sup> Gray WDT par. 11-12.

<sup>22</sup> Crawford WDT, Section II.A.2.

distant carriage, is consistent with the expectation that the heterogeneity of programming on distantly retransmitted signals is not an important factor in carriage decisions.<sup>23</sup> Instead, important factors include (1) what subscribers wanted to watch, as demonstrated by subscriber viewing behavior, competitor carriage, and subscriber surveys, and (2) legacy carriage.<sup>24</sup> Overall, CSOs' distant signal carriage decisions represent a small portion of CSOs' programming budgets.

***B. Irrelevance of Dr. Israel's Cable Channel Expenditures Analysis***

57. Again, CSOs bundle distant signal channels, cable channels, local broadcast channels and pay-per-view channels in different packages and offer them to existing and potential subscribers at varying prices. As described in the previous subsection, CSOs have a revenue maximizing incentive to bundle together a variety of different types of programming to attract and maintain as many subscribers, with different tastes in programming, as possible. Broadcast and cable channels face different economic incentives than do CSOs. Broadly speaking, local broadcast stations seek to package programming to attract viewers of various demographic groups to maximize advertising revenue, while minimizing their cost of acquiring the programming; basic cable channels seek to package content that is attractive to CSOs to be included in bundled offerings CSOs offer to their subscribers. In addition, broadcast stations are principally advertising revenue-supported while basic cable networks are supported by per subscriber fees paid by the CSOs. These economic incentives give rise to different cable channels offering niche programming, such as cooking channels, weather channels, news channels, and so on.

58. The economic incentives of cable networks and broadcast stations have contributed to the migration of live-team sports programming from broadcast television to cable networks including ESPN, Regional Sports Networks, TNT, TBS, and cable channels owned by sports leagues and college conferences. Due to this migration, the

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<sup>23</sup> Hamilton WDT, p. 5-8.

<sup>24</sup> *Ibid*, pp. 5-6.

volume of non-network live team sports carried by distantly retransmitted signals was very small over the 2010-2013 time period.<sup>25</sup>

59. While CSOs may place a high value on live team sports programming carried by certain cable networks, as described by Dr. Crawford, economic principles suggest they bundle these sports-focused cable networks with other cable channels, distant signal channels, and local broadcast channels each with little or no sports programming.

60. Therefore, Dr. Israel's analysis of certain cable networks' relative expenditures on live team sports is irrelevant to this proceeding. The expenditures of cable networks such as TBS, TNT, and ESPN on live team sports programming does not provide information on CSOs' willingness to pay for the various types of programming carried by distantly retransmitted broadcast signals. To the contrary, consistent with Dr. Crawford's economic arguments, after negotiating programming deals with cable networks carrying live team sports programming, CSOs may then have a sufficient quantity of that type of programming to bundle for its current and potential subscribers. That is, live team sports programming would be less valuable to CSOs than other types of programming.

## **V. CSO SURVEY RESPONSES VS. ACTUAL MARKETPLACE BEHAVIOR**

61. As an alternative to analyzing market choices made by subscribers, or CSOs, to quantify the relative market value of programming, JSC sponsored the Bortz Survey. A similar survey of CSOs was performed by Mr. Horowitz ("Horowitz Survey") who was retained on behalf of the Program Suppliers.

62. In his written direct testimony, Dr. Steckel described the fundamental principles of sound survey design. ("Steckel WDT"). He then proceeded to delineate how both the Bortz and Horowitz Survey methodologies violated many of these tenets. He concluded that neither survey alone provides a reasonable basis for measuring marketplace value, but the Horowitz Survey is preferred as it adjusts for some of the Bortz Survey major flaws. I agree with his conclusion.

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<sup>25</sup> See Gray WDT, Table 1; Hamilton WDT, Section IV.B; and Mansell WDT, p. 33-37.



63. The methodological flaws and associated usefulness of the two surveys notwithstanding, Table 10 below presents the share distribution of how CSO survey respondents answered, on average, how they would allocate a hypothetical fixed dollar budget across specified categories.

**Table 10: Horowitz and Bortz Survey Results of CSO Respondents Hypothetical Allocation of Fixed Dollar Amount Across Programming Categories< 2010-2013 Averages**

<i>Programming Type</i>	<i>Horowitz Survey</i>	<i>Bortz Survey</i>
News & Community/Public Affairs	12.6%	20.6%
Syndicated Series	17.5%	14.7%
Movies	13.3%	16.3%
Live team professional and college sports	30.0%	38.2%
Other sports programming	8.5%	Not Asked
Devotional programming	4.7%	4.6%
Programs on PBS stations	12.9%	5.1%
Programs on Canadian stations	0.6%	0.5%
<i>Note: Highlighted programming type fall under the Program Suppliers category.</i>		

64. As is evident in Table 10 above, a significant difference between the Horowitz and Bortz Surveys is the number of program types CSO respondents were asked to allocate a fixed dollar amount across. While the Bortz Survey includes a category for “live team professional and college sports” programming, it does not include a category for “other sports programming.” Other sports programming consists of non-live team sports such as tennis and golf tournaments, automobile races including NASCAR, triathlon competitions, the Olympics, boxing, and Mixed Martial Arts (MMA). This type of sports programming, I understand, falls within the Program Suppliers category for this proceeding.

65. An analysis of the Gracenote programming data and Nielsen viewing data described in my initial testimony indicates that the Bortz Survey’s omission of the other sports programming category is a substantial omission. Whereas sports programming

falling under the JSC category averaged 3,665,435 distantly retransmitted minutes per royalty year, sports programming falling under the Program Suppliers category averaged 1,451,808 distantly retransmitted minutes per royalty year.

66. The Bortz Survey asked survey respondents to allocate a fixed dollar amount across a *subset* of the type of programming that was available on signals available for retransmission. It is possible that, without the option to consider allocating any of their hypothetical resources to the other sports category, respondents conflated Program Suppliers sports programming with JSC's live team sports programming. Results from the Horowitz survey are consistent with this possibility as respondents' fixed-dollar allocation share to live team sports programming (30.0%) plus other sports programming (8.5%) was similar to respondents' only sports option allocation in the Bortz survey (38.2%).

67. A second difference between the surveys is the Horowitz Survey more precisely defines the programming at issue in this proceeding, explicitly defining the definitions of "non-network programming" and "distant broadcast stations."<sup>26</sup> While the Horowitz Survey questions provided examples of programming for each category (and the Bortz Survey did not), it is unclear whether the respondents understood the quantity, or quality, of programming available on signals distantly retransmitted. It is Ms. Hamilton's opinion, as someone experienced with selecting broadcast stations to distantly retransmit, that CSOs responding to the Bortz and Horowitz surveys would not be able to accurately identify JSC programming without more information concerning program quantity and the nature of the programs.<sup>27</sup>

68. In addition to survey respondents being asked to allocate hypothetical funds across programming type where actual program quantity and quality are unknown, Dr. Steckel noted in his written direct testimony that survey research literature has determined that the question formats of both the Bortz and Horowitz Surveys, constant sum questions, do

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<sup>26</sup> Direct Testimony of Howard Horowitz, Appendix A, p. 24.

<sup>27</sup> Hamilton, p. 13.

not exhibit the “strongest predictive validities.”<sup>28</sup> This is evident comparing the survey results to actual choices made by subscribers as well as by those CSOs who faced cost implications of which stations to distantly retransmit. Table 11 below summarizes royalty shares based on market-based analyses reported earlier to contrast them with the royalty shares implied by the Horowitz and Bortz Surveys.

<b>Table 11: Market-Based and CSO-Survey-Based Royalty Shares</b>						
	<i>Subscriber Choices: Viewing</i>		<i>CSO Choices: Regulated Fees Analysis</i>		<i>Constant Sum Surveys</i>	
<i>Claimant Category</i>	<i>Gray- Initial</i>	<i>Gray- Modified</i>	<i>Crawford- Modified</i>	<i>Israel- Modified</i>	<i>Horowitz Survey</i>	<i>Bortz Survey</i>
CCG	3.70%	2.60%	5.48%	4.15%	0.56%	0.53%
CTV	13.50%	10.21%	13.31%	27.20%	12.62%	20.63%
Devotionals	1.44%	1.55%	0.77%	0.64%	4.73%	4.58%
Program Suppliers	45.43%	48.93%	61.48%	44.27%	39.29%	31.00%*
PTV	33.04%	30.04%	18.96%	19.55%	12.86%	5.10%
JSC	2.89%	2.95%	0.00%	4.19%	29.96%	38.23%*

69. The market-based measures presented in Table 11 do not support the CSO survey results. The difference between the market-based royalty share measures and the survey-based measures is largest for the JSC category. This could be due to the intrinsic flaws in the survey methodologies, as delineated by Dr. Steckel’s testimony, or due to both the migration of sports programming out of broadcast television and survey respondent errors, as suggested by Ms. Hamilton’s testimony. The definition of JSC programming is narrower than what the cable industry considers sports programming.

70. Moreover, given the low supply of sports programming available on broadcast stations over 2010-2013, in an actual unregulated market, the CSO survey respondents would have been unlikely to devote the share of resources that they answered they might have devoted to sports programming.

71. I agree with Dr. Steckel’s conclusions that the CSO surveys cannot assist the Judges in determining the relative market value of programming at issue in this

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<sup>28</sup> Steckel WDT, p. 36.

proceeding, and, that market value is driven by consumer preferences.<sup>29</sup> One can ask what they want to watch or analyze what they watched. The latter is what I did in my initial testimony and the results reproduced in Table 11 above.

## VI. CONCLUSION

72. As explained above, my conclusions regarding calculating the relative market value of programming described and reported in my initial testimony are unaltered by written direct testimony submitted on behalf of CCG, CTV, JSC, or the Devotionals. In my opinion, relative program viewership provides a reasonable and reliable measure of the relative economic value of distantly retransmitted programming, and should be utilized by the Judges as the basis for allocating royalties in this proceeding.

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<sup>29</sup> Steckel WDT, pp. 7, 41.

## APPENDIX A

<b>Table A-1: Crawford Regression Replication</b>					
<b>Log Royalty Fee</b>	<b>Coefficient Estimate</b>	<b>Standard Error</b>	<b>t-stat</b>	<b>95% Confidence Interval</b>	
Distant minutes Program Suppliers	0.00000208	0.00000021	10.76	0.00000170	0.00000246
Distant minutes Sports	0.00003330	0.00000382	10.27	0.00002700	0.00003970
Distant minutes CTV	0.00000445	0.00000060	8.21	0.00000339	0.00000552
Distant minutes Public	0.00000164	0.00000019	9.27	0.00000130	0.00000199
Distant minutes Devotional	0.00000089	0.00000032	2.91	0.00000029	0.00000150
Distant minutes Canadian	0.00000429	0.00000036	11.74	0.00000357	0.00000501
Permitted Stations	0.00111020	0.02415690	0.05	0.04194280	0.04416320
Syndicated Exclusivity Surcharge	0.70434340	0.23493250	1.29	0.36225090	1.77093800
3.75% fee	0.44616170	0.04359180	10.39	0.36197750	0.53034600
Lagged number of subscribers	0.00003720	0.00000233	27.72	0.00003460	0.00003990
Distant signals	-0.47944560	0.05048030	-10.02	0.57323830	0.38565280
Interaction Charter and Lagged Subs	0.00000991	0.00000681	4.58	0.00000567	0.00001410
Interaction Comcast and Lagged Subs	-0.00002780	0.00000250	-19.91	0.00003060	0.00002510
Interaction Time Warner and Lagged Subs	-0.00000973	0.00000291	-6.5	0.00001270	0.00000680
Interaction Verizon and Lagged Subs	-0.00002980	0.00000246	-19.86	0.00003270	0.00002680
Interaction Cox and Lagged Subs	-0.00001940	0.00000254	-9.17	0.00002360	0.00001530
Interaction Others and Lagged Subs	-0.00002160	0.00000295	-13.98	0.00002460	0.00001860
Local stations	0.04631400	0.00333920	17.72	0.04119200	0.05143600
Distant unmerged minutes	0.00000342	0.00000072	5.92	0.00000229	0.00000455
Distant minutes TBA	0.00000102	0.00000187	0.61	0.00000227	0.00000431
Constant	6.90076700	0.07087710	121.39	6.78933800	7.01219600

**Table A-2: Israel Regression Replication**

Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
d_Prog_Supp	0.4693279	0.1037529	4.52	0.2659306	0.6727251
d_Sports	4.836397	2.46633	1.96	0.0014033	9.67139
d_Comm_TV	1.009978	0.3549573	2.85	0.31412	1.705837
d_Pub_Broad	0.6601077	0.3055814	2.16	0.0610461	1.259169
d_Devotional	-0.7010084	0.2459957	-2.85	-1.183258	0.2187584
d_Canadian	-0.972506	0.2123176	-4.58	-1.388733	0.5562787
d_Network	-0.9845382	0.2902276	-3.39	-1.5535	0.4155761
d_other	0.9164661	0.4622938	1.98	0.0101855	1.822747
prev_soasubscribers	1.351383	0.0600544	22.5	1.233652	1.469113
prev_channelsactivated	141.8119	18.73303	7.57	105.0877	178.5361
medianincome	1.338665	0.2856631	4.69	0.7786508	1.898679
channelsbroadcast	-493.511	326.5168	-1.51	-1133.614	146.5924
rate375	41917.92	4711.349	8.9	32681.79	51154.05
minimum_pay	-16501.17	3689.076	-4.47	-23733.24	-9269.11
Per_2	-4229.919	4837.96	-0.87	-13714.26	5254.417
Per_3	-1579.701	5020.054	-0.31	-11421.01	8261.612
Per_4	-1066.388	5363.864	-0.2	-11581.71	9448.93
Per_5	7467.661	6098.045	1.22	-4486.944	19422.27
Per_6	5585.385	6437.822	0.87	-7035.319	18206.09
_cons	-102874.7	14640.35	-7.03	-131575.6	-74173.75

Table A-3: George Regression Replication					
Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
wdchours	88.87743	32.92006	2.7	24.31935	153.4355
wdjhours	906.8371	774.1472	1.17	-611.3087	2424.983
wdphours	-293.7664	121.0112	-2.43	-531.0761	-56.45678
wdncshours	44.09334	5.294496	8.33	33.71054	54.47614
lsystems	0.7963635	0.04409	18.06	0.7099004	0.8828265
lchannels00	95.68327	18.01655	5.31	60.3518	131.0147
cndC	-18272.75	6039.841	-3.03	-30117.22	-6428.29
cndE	-1680.662	1349.807	-1.25	-4327.709	966.3847
cndI	-33.97132	403.4433	-0.08	-825.1462	757.2036
cndL	5053.886	8107.175	0.62	-10844.74	20952.51
cndN	2930.076	900.4988	3.25	1164.148	4696.005
has375	16300.34	4571.023	3.57	7336.308	25264.37
pDSEI1	-18159.54	3989.138	-4.55	-25982.46	-10336.62
merger	-26891.4	16459.22	-1.63	-59168.84	5386.048
pop	0.0408099	0.0042719	9.55	0.0324325	0.0491873
wminc	-0.1359183	0.0691983	-1.96	-0.27162	0.0002166
t					
2010_2	1237.733	4971.187	0.25	-8511.041	10986.51
2011_1	-1962.321	5574.24	-0.35	-12893.72	8969.076
2011_2	345.3621	5271.567	0.07	-9992.474	10683.2
2012_1	9869.039	6138.014	1.61	-2167.948	21906.03
2012_2	11550.63	5954.644	1.94	-126.7584	23228.02
2013_1	10236.02	5969.962	1.71	-1471.406	21943.45
2013_2	13137.22	6157.873	2.13	1061.284	25213.15
_cons	-57781.25	8645.677	-6.68	-74735.9	-40826.59

## APPENDIX B

Table B-1: Modified Crawford Regression					
Log Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
Distant minutes Program Suppliers	0.00000416	0.00000019	21.86	0.00000379	0.00000453
Distant minutes Sports	-0.00000006	0.00000559	-0.01	0.00001100	0.00001090
Distant minutes CTV	0.00000272	0.00000060	4.55	0.00000155	0.00000389
Distant minutes Public	0.00000142	0.00000014	10.39	0.00000115	0.00000169
Distant minutes Devotional	0.00000103	0.00000094	1.09	0.00000081	0.00000287
Distant minutes Canadian	0.00000433	0.00000057	7.67	0.00000322	0.00000544
Permitted Stations	-0.03602310	0.00590990	-6.1	0.04761000	0.02443630
Syndicated Exclusivity Surcharge	0.80433960	0.37130630	2.17	0.07635980	1.53231900
3.75% fee	1.17623900	0.04916620	23.92	1.07984500	1.27263400
Lagged number of subscribers	0.00000421	0.00000115	3.66	0.00000195	0.00000647
Distant signals	0.02821040	0.00494820	5.7	0.01850910	0.03791180
Interaction Charter and Lagged Subs	0.00000289	0.00000156	1.86	0.00000016	0.00000594
Interaction Comcast and Lagged Subs	-0.00000201	0.00000118	-1.7	0.00000432	0.00000031
Interaction Time Warner and Lagged Subs	-0.00000316	0.00000125	-2.53	0.00000561	0.00000071
Interaction Verizon and Lagged Subs	-0.00000177	0.00000141	-1.26	0.00000452	0.00000099
Interaction Cox and Lagged Subs	0.00000618	0.00000150	4.11	0.00000323	0.00000913
Interaction Others and Lagged Subs	-0.00000126	0.00000120	-1.05	0.00000362	0.00000110
Local stations	0.00198920	0.00038300	5.19	0.00123830	0.00274010
Distant unmerged minutes	0.00000652	0.00000131	4.99	0.00000396	0.00000908
Distant minutes TBA	0.00001210	0.00000284	4.27	0.00000656	0.00001770
Charter	0.52984310	0.13836820	3.83	0.25855960	0.80112660
Comcast	0.83404190	0.13464540	6.19	0.57005730	1.09802700
Time Warner	0.85392800	0.14971140	5.7	0.56040510	1.14745100
Verizon	3.02900200	0.40862220	7.41	2.22786100	3.83014400
Cox	0.44375200	0.18435510	2.41	0.08230700	0.80519700
Others	0.32237870	0.12264970	2.63	0.08191280	0.56284460
20102	-0.02061860	0.08184670	-0.25	0.18108660	0.13984940
20111	-0.00774800	0.08242830	-0.09	0.16935630	0.15386030
20112	-0.04674470	0.08435340	-0.55	0.21212730	0.11863790
20121	0.01433080	0.08675030	0.17	0.15575110	0.18441270
20122	-0.03113230	0.08718460	-0.36	0.20206570	0.13980110
20131	-0.08414170	0.08777210	-0.96	0.25622690	0.08794340



20132	-0.08975770	0.08825300	-1.02	0.26278590	0.08327040
Constant	5.95555600	0.14198260	41.95	5.67718600	6.23392600

## APPENDIX C

Table C-1: Israel Regression - Splitting Non Compensable minutes					
Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
WGN_d_Prog_Supp	0.4197273	0.1025823	4.09	0.218625	0.6208295
WGN_d_NC_Prog_Supp	0.8783349	0.5940699	1.48	0.2862797	2.04295
d_Sports	-4.042402	3.187437	-1.27	-10.29105	2.206249
d_Comm_TV	1.808528	0.40472	4.47	1.015115	2.601941
d_Pub_Broad	0.806503	0.315594	2.56	0.1878125	1.425193
WGN_d_Devotional	-0.8812088	0.254051	-3.47	-1.37925	0.3831672
WGN_d_NC_Devotional	1.579644	7.218488	0.22	-12.57148	15.73077
d_Canadian	-0.6314481	0.1855997	-3.4	0.9952978	0.2675984
d_Network	-0.9054625	0.2875236	-3.15	-1.469124	0.3418014
d_other	1.024824	0.4690267	2.19	0.1053444	1.944304
prev_soasubscribers	1.350359	0.0599564	22.52	1.232821	1.467898
prev_channelsactivated	138.8511	18.54987	7.49	102.4859	175.2163
medianincome	1.408955	0.2902127	4.85	0.8400217	1.977888
channelsbroadcast	-483.3794	325.3904	-1.49	-1121.275	154.5159
rate375	43180.18	4791.171	9.01	33787.57	52572.79
minimum_pay	-15368.34	3657.171	-4.2	-22537.85	-8198.816
Per_2	2988.859	5128.106	0.58	-7064.28	13042
Per_3	4568.918	5571.838	0.82	-6354.112	15491.95
Per_4	2022.901	6485.275	0.31	-10690.83	14736.63
Per_5	11210.93	8052.004	1.39	-4574.221	26996.08
Per_6	12499.98	7134.948	1.75	-1487.374	26487.33
_cons	-116098.6	15595.57	-7.44	-146672.2	-85525.04

**Table C-2: Israel Regression - Log Royalty Fee**

Log Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
d_Prog_Supp	0.00000744	0.00000089	8.39	0.00000570	0.00000918
d_Sports	-0.00000156	0.00001970	-0.08	0.00004020	0.00003710
d_Comm_TV	0.00003250	0.00000401	8.11	0.00002470	0.00004040
d_Pub_Broad	-0.00000390	0.00000187	-2.09	0.00000757	0.00000024
d_Devotional	0.00000532	0.00000261	2.04	0.00000020	0.00001040
d_Canadian	0.00000046	0.00000160	0.29	0.00000268	0.00000361
d_Network	-0.00002280	0.00000314	-7.26	0.00002890	0.00001660
d_other	0.00001060	0.00000317	3.33	0.00000435	0.00001680
prev_soasubscribers	0.00000517	0.00000027	18.90	0.00000463	0.00000570
prev_channelsactivated	0.00206130	0.00009300	22.16	0.00187900	0.00224370
medianincome	0.00000748	0.00000118	6.32	0.00000516	0.00000980
channelsbroadcast	0.00519820	0.00125000	4.16	0.00274780	0.00764870
rate375	0.40367960	0.02672630	15.10	0.35128540	0.45607370
minimum_pay	-0.06085000	0.02756950	-2.21	0.11489730	0.00680280
Per_2	-0.07312380	0.03699020	-1.98	0.14563950	0.00060820
Per_3	-0.07761480	0.03653810	-2.12	0.14924420	0.00598540
Per_4	-0.13065470	0.03604340	-3.62	0.20131410	0.05999530
Per_5	-0.10859340	0.03811660	-2.85	0.18331730	0.03386960
Per_6	-0.17020630	0.04011770	-4.24	0.24885310	0.09155950
_cons	8.80706600	0.06772000	130.05	8.67430800	8.93982400

**Table C-3: Israel Regression - Royalty over minimum**

Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
d_Prog_Supp	0.3766046	0.0614288	6.13	0.2561796	0.4970295
d_Sports	-0.1629718	1.316926	-0.12	-2.744673	2.418729
d_Comm_TV	1.310296	0.2219662	5.9	0.8751532	1.745438
d_Pub_Broad	0.5170267	0.1371004	3.77	0.2482551	0.7857982
d_Devotional	-0.5187264	0.1429903	-3.63	0.7990445	0.2384082
d_Canadian	0.125472	0.1124229	1.12	0.0949217	0.3458657
d_Network	-0.5917609	0.1881096	-3.15	0.9605309	0.2229909
d_other	0.8405723	0.2795509	3.01	0.2925407	1.388604
prev_soasubscribers	0.1322358	0.0212329	6.23	0.0906108	0.1738607
prev_channelsactivated	55.0479	7.884912	6.98	39.59032	70.50548
medianincome	0.234927	0.0833782	2.82	0.0714724	0.3983816
channelsbroadcast	-281.8809	130.3493	-2.16	-537.4176	-26.34415
rate375	36302.27	2798.74	12.97	30815.62	41788.92
minimum_pay	-12471.1	1626.929	-7.67	-15660.53	-9281.666
Per_2	618.7489	2553.365	0.24	-4386.867	5624.365
Per_3	612.886	2617.627	0.23	-4518.709	5744.481
Per_4	-2150.27	2809.418	-0.77	-7657.852	3357.311
Per_5	-484.025	3110.544	-0.16	-6581.935	5613.885
Per_6	1725.703	3242.029	0.53	-4629.969	8081.376
_cons	-32391.53	5595.567	-5.79	-43361.08	-21421.98

**Table C-4: Israel Regression - Log Royalty Fee over minimum**

Log Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
d_Prog_Supp	0.00002830	0.00000185	15.29	0.00002470	0.00003190
d_Sports	0.00002730	0.00004060	0.67	0.00005230	0.00010700
d_Comm_TV	0.00005500	0.00000712	7.72	0.00004100	0.00006900
d_Pub_Broad	0.00004100	0.00000403	10.18	0.00003310	0.00004890
d_Devotional	0.00000515	0.00000561	0.92	0.00000584	0.00001610
d_Canadian	0.00003050	0.00000334	9.14	0.00002400	0.00003710
d_Network	0.00003390	0.00000568	5.98	0.00002280	0.00004510
d_other	0.00004180	0.00000547	7.65	0.00003110	0.00005250
prev_soasubscribers	0.00000395	0.00000030	13.42	0.00000338	0.00000453
prev_channelsactivated	0.00089540	0.00022070	4.06	0.00046270	0.00132810
medianincome	0.00000792	0.00000331	2.39	0.00000142	0.00001440
channelsbroadcast	0.00786720	0.00229840	3.42	0.00336050	0.01237380
rate375	1.55585600	0.05620620	27.68	1.44564700	1.66606500
minimum_pay	-8.35046400	0.26057170	-32.05	8.86139400	7.83953300
Per_2	-0.04658080	0.09813270	-0.47	0.23899990	0.14583830
Per_3	-0.07684890	0.09425610	-0.82	0.26166690	0.10796900
Per_4	-0.12057540	0.09693240	-1.24	0.31064100	0.06949010
Per_5	-0.07818780	0.10016590	-0.78	0.27459360	0.11821810
Per_6	-0.16294460	0.10451790	-1.56	0.36788390	0.04199470
_cons	5.42709500	0.18722750	28.99	5.05997800	5.79421100

## APPENDIX D

Table D-1: George Regression - Log Royalty Fee					
Log Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
wdchours	0.00072080	0.00039920	1.81	-	0.00150370
wdjhours	0.00775860	0.00901550	0.86	-	0.02543850
wdphours	-0.00172590	0.00130550	-1.32	-	0.00083430
wdncshours	0.00037720	0.00005370	7.02	-	0.00048250
lsystemsub	0.00000277	0.00000028	10.06	-	0.00000331
lchannels00	0.00188340	0.00010680	17.64	-	0.00209280
cndC	-0.11763260	0.04719470	-2.49	-	0.02508120
cndE	0.00171530	0.00651880	0.26	-	0.01449900
cndI	0.01850720	0.00405710	4.56	-	0.02646340
cndL	0.00645260	0.05806780	0.11	-	0.12032690
cndN	-0.02010550	0.00647060	-3.11	-	0.00741630
has375	0.28977640	0.03982520	7.28	-	0.36787590
pDSEI1	-0.23178330	0.04218760	-5.49	-	0.14905100
merger	0.10006510	0.08904800	1.12	-	0.27469320
pop	0.00000024	0.00000002	13.15	-	0.00000027
wminc	-0.00000970	0.00000098	-9.86	-	0.00000777
t					
2010_2	-0.06147280	0.05639200	-1.09	-	0.04911520
2011_1	-0.09970780	0.05655600	-1.76	-	0.01120170
2011_2	-0.17029590	0.05801050	-2.94	-	0.05653390
2012_1	-0.17583660	0.06005430	-2.93	-	0.05806660
2012_2	-0.18939160	0.06173820	-3.07	-	0.06831960
2013_1	-0.20699240	0.06200730	-3.34	-	0.08539260
2013_2	-0.20117410	0.06318680	-3.18	-	0.07726130
cons	9.62680500	0.06652330	144.71	-	9.75726000


**Table D-2: George Regression - Log Royalty Fee, No minimum**

Log Royalty Fee	Coefficient Estimate	Standard Error	t-stat	95% Confidence Interval	
wdchours	0.00082400	0.00044360	1.86	0.00004630	0.00169420
wdjhours	0.01381890	0.00993840	1.39	0.00568090	0.03331860
wdphours	-0.00251750	0.00139920	-1.8	0.00526290	0.00022780
wdncshours	0.00034650	0.00006230	5.56	0.00022430	0.00046860
lsystems	0.00000302	0.00000024	12.81	0.00000255	0.00000348
lchannels00	0.00161100	0.00014310	11.26	0.00133030	0.00189180
cndC	-0.23838080	0.06281370	-3.8	0.36162560	-0.11513600
cndE	-0.00653410	0.00869570	-0.75	0.02359560	0.01052750
cndI	0.02157170	0.00574290	3.76	0.01030380	0.03283970
cndL	-0.15438660	0.07525740	-2.05	0.30204680	-0.00672640
cndN	-0.02296740	0.00843140	-2.72	0.03951040	-0.00642440
has375	0.24939480	0.04751460	5.25	0.15616790	0.34262160
pDSEL1	0.00000000	(omitted)			
merger	0.05629070	0.10295120	0.55	0.14570670	0.25828810
pop	0.00000024	0.00000003	8.33	0.00000018	0.00000030
wminc	-0.00001080	0.00000153	-7.05	0.00001370	-0.00000776
t					
2010_2	-0.04146550	0.08028460	-0.52	0.19898940	0.11605850
2011_1	-0.08523360	0.08129080	-1.05	0.24473190	0.07426460
2011_2	-0.15963690	0.08092100	-1.97	0.31840950	-0.00086430
2012_1	-0.15598980	0.08388960	-1.86	0.32058700	0.00860740
2012_2	-0.14699000	0.08764450	-1.68	0.31895450	0.02497450
2013_1	-0.20694630	0.08826690	-2.34	0.38013210	-0.03376050
2013_2	-0.19288670	0.09078440	-2.12	0.37101200	-0.01476150
_cons	9.82254300	0.09544150	102.92	9.63528100	10.00981000

DECLARATION OF JEFFREY S. GRAY, PH.D.

I declare under penalty of perjury that the foregoing testimony is true and correct,  
and of my personal knowledge.

Executed on September 14, 2017

  
\_\_\_\_\_  
Jeffrey S. Gray, Ph.D.



Martin Frankel, Ph.D.

**SEPTEMBER 15, 2017**

## **REBUTTAL TESTIMONY OF MARTIN R. FRANKEL, PH.D.**

### **A. BACKGROUND**

My name is Martin R. Frankel. Until my retirement on August 24, 2017, I worked as a Professor of Statistics and Computer Information Systems at Baruch College, City University of New York. I held this position at various levels (Assistant, Associate, and Full Professor) for more than 30 years. I also held a professional appointment on the Graduate Faculty of the City University of New York. I provided more detailed information about my education and experience, and a copy of my curriculum vitae, in the Written Direct Testimony that I submitted in this proceeding on December 22, 2016, as a part of Program Suppliers' Written Direct Statement. That experience includes my professional activities, including my past work as Chair of the Committee on Standards for the American Association for Public Opinion Research ("AAPOR"), and describes my prior expert testimonies before state and federal courts and administrative agencies, including the Nuclear Regulatory Commission ("NRC") and the Interstate Commerce Commission ("ICC"), addressing statistical sampling, survey sampling, and interpretation of statistical evidence related to surveys. My Written Direct Testimony in this proceeding also explains the sample selection, estimation, and standard error calculation work that I performed in connection with the cable operator surveys that Program Suppliers commissioned for this proceeding, which were conducted by Horowitz Research, Inc. ("Horowitz").

### **B. PURPOSE OF REBUTTAL TESTIMONY**

Program Suppliers asked me to review the Written Direct Testimony of James M. Trautman and the attached report by Bortz Media & Sports Group, Inc. ("Bortz") entitled *Cable Operator Valuation Of Distant Signal Non-Network Programming: 2010-13* ("Bortz Report"),

JSC has failed to produce all of the input data necessary for a competent statistician to replicate or test multiple bottom-line numbers reported in the Bortz Report. Specifically, JSC has failed to produce the input data required for me perform the statistical analyses necessary to evaluate the accuracy and reliability of the weighted survey results or the confidence intervals contained in the Bortz Report.

JSC produced a set of *redacted* Bortz survey questionnaires (a representative example for the 2013 royalty year produced as JSC 00008168 – JSC 00008172 is attached hereto as *Frankel Exhibit 1*)<sup>3</sup> and a set of *redacted* Bortz survey data entry spreadsheets (a representative excerpt reporting all of the Bortz survey responses to the constant sum valuation question for the 2013 royalty year produced as JSC 00008183 2013 Redacted.xlsx is attached hereto as *Frankel Exhibit 2*).<sup>4</sup> The produced materials are redacted to remove input data regarding the royalties paid by each cable system, the sample stratum to which each cable system is assigned, and the number of each cable system's subscribers. Without these input data linked to the percentage allocations made by the Bortz survey respondents in each royalty year, I am unable to replicate or test the weighted survey results or confidence intervals set forth in the Bortz Report or perform other relevant analyses.

The exhibits attached to my testimony provide a helpful illustration of JSC's redactions and how they impede the replication and any meaningful statistical analysis of the weighted Bortz Survey results and confidence intervals set forth in the Bortz Report.

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<sup>3</sup> JSC produced the entire set of redacted questionnaires marked with bates stamped numbers JSC 00005097 - JSC 00008172.

<sup>4</sup> JSC produced the entire set of redacted Bortz survey data entry spreadsheets as Microsoft Excel files marked with bates stamped numbers JSC 00008183 –JSC 00008186. Frankel Exhibit 2 is a printed excerpt of a native Microsoft Excel file produced as JSC 00008183 2013 Redacted.xlsx. Because this file was produced in a native format, the redacted information appears to have been removed from the file rather than obscured.

As Frankel Exhibit 1 shows, the Bortz survey questionnaires have been redacted to not only remove individual respondent information (such as the name of the individual being interviewed and their telephone number), but also information such as the royalties associated with the cable system, the number of subscribers associated with the cable system, and the particular sample stratum to which that system is assigned – input data that is necessary for statistical and other analyses of the survey results. *See* Frankel Exhibit 1 at 1. As Frankel Exhibit 2 shows, JSC has removed information identifying the royalties, number of subscribers, and the sample stratum to which each respondent system is assigned.

The missing information described in the foregoing paragraphs is necessary for meaningful analyses of the Bortz survey data. I cannot replicate or test the weighted Bortz survey results or the confidence intervals set forth in the Bortz Report without information identified above about each surveyed cable system, the corresponding sample stratum, and percentage allocations to the Bortz constant sum question. Also, I am unable to perform other relevant analyses that I may find appropriate. For example, besides replicating and testing the Bortz survey results, I may wish to analyze allocations tendencies of respondents within each stratum. I cannot perform such an exercise without the requested input data.

The significance of JSC's redactions cannot be understated. Only the weighted Bortz survey results can be projected to the universe of cable systems subject to the cable statutory license. In my experience, unweighted and weighted survey results can often differ substantially, and it is not reasonable to make an inference regarding the reliability of weighted survey results based on their similarity to unweighted survey results. Accordingly, it is critical that all input data underlying both the unweighted and weighted Bortz survey results be made available for independent statistical review and analyses. Moreover, I understand that, in the last litigated

Phase I allocation proceeding before the Copyright Royalty Judges (“Judges”), the Judges relied on the Bortz confidence intervals as the basis for fashioning the royalty awards for several claimant categories, including the Program Suppliers category.<sup>5</sup> The fact that these bottom-line numbers have received such significant consideration in a past proceeding underscores the necessity that they be subjected to independent statistical scrutiny.

Based on my experience, including both my past experience serving as an expert statistician evaluating surveys in other state, federal, and administrative contexts, and my experience working with AAPOR, I have never seen input data necessary for independent verification of weighted survey results and confidence intervals redacted from discovery production related to a survey, as JSC has done in this proceeding. Indeed, AAPOR’s Code Of Professional Ethics requires its members to adhere to standards of requiring access to survey datasets to encourage transparency and replicability of survey results, and permits de-identification only to “protect the privacy of individual respondents.”<sup>6</sup> In my opinion, JSC’s redactions to the Bortz input data exceeds what is legitimately reasonable to protect the privacy of individual Bortz survey respondents under this standard.

I understand that JSC has offered to produce unredacted copies of the Bortz survey questionnaires and data entry spreadsheets to Cable Data Corporation (“CDC”) and has proposed having opposing parties request analyses or reports related to the Bortz data from CDC, as JSC did in the 2004-2005 Cable Phase I proceeding. I am familiar with CDC’s operations and expertise, having used CDC data in connection with my own sample selection and estimation

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<sup>5</sup> See 75 Fed. Reg. 57063, 57068 and 57070 (September 17, 2010).

<sup>6</sup> See AAPOR Code Of Professional Ethics at p. 7 (Section II.E.).

work related to the Horowitz survey in this proceeding. In my professional opinion, it would not be appropriate to have CDC serve in the role suggested by JSC.

*First*, CDC lacks the statistical expertise necessary to evaluate the unredacted Bortz input data and perform the statistical analysis necessary to test the reliability of the weighted Bortz survey results and confidence intervals. Thus, it would be unreasonable for Program Suppliers (or the Judges) to rely on CDC for such an analysis in this proceeding. *Second*, as an expert statistician, I do not consider it appropriate or reasonable for me to rely on statistical analyses performed by a non-expert third party such as CDC as the basis for any of my conclusions regarding the reliability of the Bortz survey, or the reasonableness of any of the computations underlying the weighted Bortz survey results or the confidence intervals contained in the Bortz Report.

JSC has suggested that I could utilize CDC to perform non-statistical analyses by preparing so-called “fill in the blank” statistical programs and providing them to CDC.<sup>7</sup> However, not only would such a process deprive me of any means to check the accuracy of the “fill-in-the blanks” data-entry work done by CDC (and thus confirm the accuracy of any so-called “bottom-line results” that CDC provided me in response to my queries), it would unnecessarily permit JSC to control the manner and form in which I could conduct my analysis, thereby compromising my ability to perform a complete and independent statistical review of the Bortz survey results and render my own expert opinion regarding their validity. JSC’s proposal is also inefficient and burdensome, as it would force me to be subject to CDC’s availability to

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<sup>7</sup> See JSC Opposition to Program Suppliers’ Motion To Compel at Exhibit C (Wecker Decl.) at ¶¶ 7-8; *see also* Opposition Exhibit B (Mathiowetz Decl.) at ¶ 12.

implement and turnaround each of my Bortz-related requests. Accordingly, JSC's proposal compromises my ability to verify and test the reliability of the Bortz survey results.

#### **D. CONCLUSION**

JSC could have (and still could produce) the unredacted Bortz Survey documents to me directly, since I am an independent professional and not employed by Horowitz or any organization or entity that could be reasonably construed as a competitor to Bortz.<sup>8</sup> To date, however, that has not occurred. Without the production of unredacted documents related to the Bortz survey, I do not find it possible to perform a complete and independent statistical review and analysis of the Bortz survey results. Moreover, no competent statistician could perform an independent analysis of the Bortz sampling and estimation processes without the production of the complete underlying input data described above. Therefore, I reserve my opinion on the statistical validity of the Bortz survey results until JSC produces the unredacted input data to Program Suppliers in this proceeding that would enable me to conduct an independent statistical analysis of the sampling and estimation processes used in the Bortz Report.

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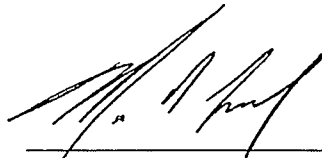
<sup>8</sup> I understand that Program Suppliers conveyed this proposal to JSC, and that JSC rejected it, even though JSC has received the equivalent information in discovery from Program Suppliers related to the Horowitz survey.



**Declaration of Martin R. Frankel**

I declare under penalty of perjury that the foregoing testimony is true and correct, and of my personal knowledge.

Executed on September 9, 2017.

A handwritten signature in black ink, appearing to read 'M. Frankel', is written over a horizontal line.

Martin R. Frankel, Ph.D.

**FRANKEL EXHIBIT 1**

Royalties \_\_\_\_\_  
 Strata \_\_\_\_\_

SYSTEM OPERATOR  
 PROGRAMMING QUESTIONNAIRE

VERSION D

System Name: \_\_\_\_\_  
 City / State: \_\_\_\_\_  
 Subscribers: \_\_\_\_\_  
 Respondent's Name: \_\_\_\_\_  
 Position: VP General Manager  
 Telephone Number: \_\_\_\_\_  
 Date: 1/10/13  
 Interviewer: [Signature]

(ASK TO SPEAK WITH LISTED RESPONDENT. IF UNAVAILABLE, CONFIRM HE / SHE IS PERSON MOST RESPONSIBLE FOR PROGRAMMING CARRIAGE DECISIONS FOR THE SYSTEM AND ARRANGE CALL BACK. IF NOT, ASK TO SPEAK WITH THE PERSON MOST RESPONSIBLE FOR PROGRAMMING CARRIAGE DECISIONS FOR THE SYSTEM.)

Hello, I'm \_\_\_\_\_ from \_\_\_\_\_. We are conducting a short national survey among randomly selected cable systems regarding certain programming they carry. I only have a few questions.

1. Are you the person most responsible for programming carriage decisions made by your system during 2013 or not?

Yes ..... 1

No ..... 2

ASK TO SPEAK WITH PERSON MOST RESPONSIBLE FOR THE SYSTEM'S PROGRAMMING CARRIAGE DECISIONS IN 2013. REPEAT INTRODUCTION AND Q.1.

- 2a. Industry data indicate that your system serving (ENTER COMMUNITY LISTED ABOVE; i.e., primary community from SOA) and nearby communities carried the following broadcast stations from other cities in 2013:

Call Letters	Com/ Non/ Can	Affil	City	INSERT DISTANT SIGNAL CALL LETTERS, CITY AND AFFILIATION
WETA-DT	Non	E	Washington, DC	
WGN-DT	Com	E	Chicago, IL	
WTVR-DT	Com	N	Richmond, VA	
WVPT-DT	Non	E	Staunton, VA	
WJZ-DT	Com	N	Baltimore, MD	
WBAL-DT	Com	N	Baltimore, MD	
WNPB-DT	Non	E	Morgantown, WV	
WNVC-DT	Non	E	Fairfax, VA	

- 2b. Now, I'd like to ask you how important it was for your system to offer certain categories of programming that are carried by these stations. When you consider this, please exclude from consideration any national network programming from ABC, CBS and NBC. I've grouped the non-network programming on these broadcast stations into six categories. I will read these six categories to you to give you a chance to think about their relative importance (READ EACH CATEGORY BELOW, STARTING WITH THE CATEGORY MARKED BY THE NUMBER "1"). Considering only the non-network programming on these broadcast stations, please rank these six categories in order of their importance to your system in 2013, with one being the most important category and six being the least important category. What is your ranking of importance for the 2013 (READ FIRST CATEGORY, AS MARKED BY THE NUMBER "1") programming on the broadcast stations I listed. (REPEAT FOR ALL SIX CATEGORIES, IN ORDER LISTED BELOW. ENTER NUMERICAL RANK ON TABLE BELOW.)

Start	Category	Rank
6	Movies	6
4	Live Professional and College Team Sports	5
3	Syndicated Shows, Series and Specials	4
2	News and Other Station-Produced Programs	1
5	PBS and All Other Programming Broadcast by Noncommercial Station(s)	2
1	Devotional Programs	3
	WETA-DT	
	WVPT-DT	
	WNPB-DT	
	WNVC-DT	

3. Next, I'm going to ask you how expensive you think it would have been for your system to acquire the non-network programming on the broadcast stations I listed in each of the six categories if your system had to purchase that programming directly in the marketplace. I will read the six categories to you to give you a chance to think about their relative cost. (READ EACH CATEGORY BELOW, STARTING WITH THE CATEGORY MARKED BY THE NUMBER "1"). Considering only the non-network programming on the broadcast stations I listed, please rank these six categories in order of how expensive each would have been to your system in 2013, with one being the most expensive category and six being the least expensive category. What is your cost ranking for the 2013 (READ FIRST CATEGORY, AS MARKED BY THE NUMBER "1") programming on the broadcast stations I listed. (REPEAT FOR ALL SIX CATEGORIES, IN ORDER LISTED BELOW. ENTER NUMERICAL RANK ON TABLE BELOW.)

Start	Category	Rank
<u>6</u>	Movies	<u>3</u>
<u>4</u>	Live Professional and College Team Sports	<u>1</u>
<u>3</u>	Syndicated Shows, Series and Specials	<u>2</u>
<u>2</u>	News and Other Station-Produced Programs	<u>4</u>
<u>5</u>	PBS and All Other Programming Broadcast by Noncommercial Station(s) <u>WETA-DT</u>	<u>5</u>
<u>1</u>	Devotional Programs <u>WVPT-DT</u>	<u>6</u>
	<u>WNPB-DT</u>	
	<u>WNVC-DT</u>	

- 4a. Now, I would like you to estimate the relative value to your cable system of each category of programming actually broadcast by the stations I mentioned during 2013, excluding any national network programming from ABC, CBS and NBC. Just as a reminder, we are only interested in commercial station(s) WGN-OT, WTVR-OT, WJZ-OT, and noncommercial station(s) WETA-OT, WVPT-OT, WNPB-OT, WNNC-OT WBAL-OT

I'll read each of the six programming categories we've been discussing again to give you a chance to think about them; please write the categories down as I am reading them. (READ PROGRAM CATEGORIES IN ORDER, STARTING WITH CATEGORY MARKED BY THE NUMBER "1".) Assume your system spent a fixed dollar amount in 2013 to acquire all the non-network programming actually broadcast during 2013 by the stations I listed. What percentage, if any, of the fixed dollar amount would your system have spent for each category of programming? Please write down your estimates, and make sure they add to 100 percent.

What percentage, if any, of the fixed dollar amount would your system have spent on (READ PROGRAM CATEGORY MARKED BY THE NUMBER "1")? And what percentage, if any, would your system have spent on (READ NEXT PROGRAM CATEGORY)? (COMPLETE LIST IN THIS MANNER.)

<u>Start</u>		<u>Percent</u>
( 6 )	<u>Movies</u> broadcast during 2013 by the commercial stations I listed. ....	<u>10</u>
( 4 )	<u>Live professional and college team sports</u> broadcast during 2013 by the commercial stations I listed. ....	<u>35</u>
( 3 )	<u>Syndicated shows, series and specials</u> distributed to more than one television station and broadcast during 2013 by the commercial stations I listed. ....	<u>15</u>
( 2 )	<u>News and public affairs programs</u> produced by or for any of the commercial stations I listed, for broadcast during 2013 only by that station. ..	<u>25</u>
( 5 )	<u>PBS and all other programming</u> broadcast during 2013 by noncommercial station(s) <u>WETA-OT, WVPT-OT, WNPB-OT, WNNC-OT</u> .....	<u>10</u>
( 1 )	<u>Devotional and religious programming</u> broadcast during 2013 by the commercial stations I listed. ....	<u>5</u>
TOTAL	.....	<u>100</u>

PERCENTAGES MUST ADD TO 100 PERCENT; PROMPT RESPONDENT IF THEY DO NOT.

- 4b. Now I'm going to read back the categories and your estimates. (REREAD CATEGORIES AND RESPONSES IN ORDER, STARTING WITH CATEGORY MARKED BY THE NUMBER "1," TO ALLOW RESPONDENT TO REVIEW THE ESTIMATES.)

Are there any changes you would like to make? (RECORD ANY CHANGES BY CROSSING OUT ORIGINAL RESPONSE AND WRITING IN REVISED RESPONSE NEXT TO IT. PERCENTAGES MUST STILL ADD TO 100 PERCENT; PROMPT RESPONDENT IF THEY DO NOT.)

Thank you for your time and cooperation.

**FRANKEL EXHIBIT 2**



## JSC 00008183 2013 Redacted.xlsx (Excerpt Showing Bortz Survey Respondent Constant Sum Valuation Information)

ID Number	Position	Date	Q1	2bMovie	2bSport	2bSynd	2bNews	2bPBS	2bDevo	2bCan	3Movie	3Sport	3Synd	3News	3PBS	3Devo	3Can	4aMov	4aSports	4aSynd	4aNews	4aPBS	4aDevo	4aCan	% Total
1	Video Product	9/14/14	YES	1	2	5	4	3	6		2	1	4	3	5	6		25	30	5	10	25	5		100
2	VP Mktg	8/22/14	YES	4	2	1	3		5		2	1	3	4		5		10	30	40	15		5		100
3	Mktg Dir	8/15/14	YES	5	1	3	4	2	6		2	1	3	4	5	6		10	30	10	25	20	5		100
4	Mktg Dir	8/15/14	YES	3	1	4	2		6	5	2	1	3	4		5	6	15	40	10	20		5	10	100
5	Video Product	9/14/14	YES	1	3	4	2		5		2	1	3	4		5		20	30	15	25		10		100
6	VP	11/4/14	YES	4	2	3	1	6	5		2	1	3	4	5	6		10	30	10	40	5	5		100
7	VP	11/4/14	YES	4	2	3	1	6	5		2	1	3	4	5	6		10	25	10	40	10	5		100
8	Regional VP	10/21/14	YES	4	2	3	1	5	6		3	1	2	5	6	4		15	40	15	15	5	10		100
9	Regional VP	10/23/14	YES	3	1	4	2		5		2	1	3	4		5		15	50	15	15		5		100
10	Regional VP	10/21/14	YES	5	3	2	1	6	4		3	1	2	5	6	4		10	35	5	40	5	5		100
11	Regional VP	10/21/14	YES	4	2	3	1	5	6		3	1	2	5	6	4		15	40	15	15	5	10		100
12	NA	8/26/14	YES	4	2	3	1	5	6		2	1	3	4	5	6		20	35	10	20	10	5		100
13	VP Ops.	10/7/14	YES	3	2	4	1		5		2	1	3	4		5		20	30	20	20		10		100
14	VP Ops.	10/7/14	YES	3	2	4	1	5	6		2	1	3	4	5	6		15	25	15	20	15	10		100
15	Video Content	8/13/14	YES	3	1	4	2		5		2	1	3	4		5		20	50	5	20		5		100
16	VP	10/28/14	YES	3	1	4	2		5		2	1	3	4		5		15	50	15	15		5		100
17	President	10/23/14	YES	3	1	2	4	5	6	7	2	1	3	4	6	5		20	30	15	15	10	5	5	100
18	Mktg Dir	8/25/14	YES	3	1	4	2	5	6		2	1	3	4	5	6		15	40	10	25	5	5		100
19	Mktg Dir	8/25/14	YES	4	1	3	2	5	6		2	1	3	4	5	6		10	40	5	25	10	10		100
20	Director GVT Relations	9/25/14	YES	5	3	4	2	1	6		2	1	3	4	5	6		15	25	10	20	20	10		100
21	Director GVT Relations	9/15/14	YES	3	2	5	4	1	6		2	1	4	3	5	6		15	30	5	25	20	5		100
22	Director GVT Relations	9/22/14	YES	5	2	4	1	3	6		2	1	3	4	5	6		15	45	10	20	10	0		100
23	Reg. Mktg. Mgr.	9/29/14	YES	3	1	4	2		5		2	1	3	4		5		20	40	10	20		10		100
24	Reg. Mktg. Mgr.	9/29/14	YES	4	1	2	3		5		2	1	3	4		5		20	40	10	20		10		100
25	Director GVT Relations	9/22/14	YES	5	2	4	1	3	6		2	1	3	4	5	6		15	25	10	20	20	10		100
26	Area VP	10/9/14	YES	5	3	4	1	2	6		2	1	3	4	5	6		15	25	5	25	25	5		100
27	Area VP, Operations	11/14/14	YES	4	1	5	2	3	6	7	3	1	2	4	5	6		7	10	40	5	30	5	5	100
28	Area VP	10/9/14	YES	4	2	5	1	3	6		2	1	3	4	5	6		15	30	10	20	20	5		100
29	Area VP	10/9/14	YES	5	2	4	1	3	6		2	1	3	4	5	6		15	35	5	25	15	5		100
30	Area VP, Operations	11/14/14	YES	3	1	5	2	4	6	7	3	1	2	4	5	6		7	10	40	5	30	5	5	100
31	VP	11/13/14	YES	4	1	3	2	5	6		1	2	4	3	5	6		10	40	10	30	5	5		100
32	VP	11/13/14	YES	4	1	3	2	5	6		1	2	4	3	5	6		10	40	10	30	5	5		100
33	GM	10/7/14	YES	3	1	4	2		5		1	2	4	3		5		15	35	10	30		10		100
34	Reg. Mktg. Dir.	9/29/14	YES	3		4	1	2	5		1		2	3	4	5		20		25	35	15	5		100
35	Reg. Mktg. Dir.	10/14/14	YES	3	2	4	1		5		1	2	3	4		5		25	25	10	30		10		100
36	Group VP	11/21/14	YES	4	2	3			5		2	1	3	4		5		20	40	15	25		0		100
37	Reg. Mktg. Dir.	9/29/14	YES	3		4	1	2	5		1		2	3	4	5		20		25	35	15	5		100
38	Reg. Prog. Dir.	10/7/14	YES	2	1	5	3	7	6	4	2	1	4	3	6	7	5	20	40	5	15	5	5	10	100
39	Reg. Prog. Dir.	10/7/14	YES	2	1	5	3	7	6	4	2	1	4	3	6	7	5	20	40	5	15	5	5	10	100
40	Reg. Prog. Dir.	10/7/14	YES	2	1	5	3	7	6	4	2	1	4	3	6	7	5	20	40	5	15	5	5	10	100
41	Marketing Director	12/2/14	YES	5	3	2	1	4	6		3	1	2	4	5	6		10	35	15	25	10	5		100
42	Marketing Director	12/2/14	YES	5	3	4	1	2	6		3	1	2	4	5	6		10	35	15	25	10	5		100
43	Operations Manager	8/29/14	YES	3	2	4	1		5		2	1	3	4		5		15	50	15	10		10		100
44	Reg. Mktg.	10/28/14	YES	3	2	4	1		5		2	1	3	4		5		15	30	15	35		5		100
45	GM	11/20/14	YES	3	1	4	2	5	6		2	1	3	4	5	6		15	45	10	20	5	5		100
46	Dir. Mktg.	12/4/14	YES	3	1	4	2	5	6		3	1	4	2	6	5		20	40	10	25	5	0		100
47	Dir. Mktg.	12/4/14	YES	3	1	4	2	5	6		3	1	4	2	5	6		20	40	10	20	10	0		100
48	Sr. Prod. Mgr.	10/22/14	YES	3		2	1		4		1		2	3		4		40		30	20		10		100
49	Sr. Prg. Mktg. Mgr.	11/25/14	YES	4	2	5	3	1	6		2	1	4	5	3	6		10	30	10	15	30	5		100
50	Marketing Director	12/2/14	YES	5	3	2	1	4	6		3	1	2	4	5	6		10	35	15	25	10	5		100
51	GM	11/12/14	YES	2	1	4	3		5		2	1	4	3		5		25	40	10	25		0		100
52	Mktg.	12/10/14	YES	4	1	7	5	3	6	2	3	1	6	5	4	7	2	15	25	5	20	10	5	20	100
53	Mktg.	12/10/14	YES	4	1	6	2	3	5		2	1	4	3	5	6		20	40	5	25	10	0		100
54	Regional VP	12/11/14	YES	3	1	2	4	5	6		2	1	3	4	5	6		15	40	20	15	5	5		100
55	GM	11/12/14	YES	2	1	4	3		5		2	1	4	3		5		25	40	10	25		0		100
56	Grp. VP	12/5/14	YES	3	1	4	2	5	6		3	1	2	4	5	6		15	45	5	20	10	5		100
57	Grp. VP	12/5/14	YES	2	1	5	3	4	6		3	1	2	4	5	6		15	45	5	20	10	5		100
58	Sr. Video Prod. Dir.	12/15/14	YES	4	1	5	2	3	6	7	2	1	3	4	5	6	7	20	30	10	20	10	5	5	100
59	Sr. Video Prod. Dir.	12/15/14	YES	3	1	4	2		5	6	2	1	3	4		5	6	20	30	15	23		10	2	100
60	Sr. Video Prod. Dir.	12/15/14	YES	3	1	5	2	4	6		2	1	3	4	5	6		20	30	10	20	15	5		100
61	VP Mktg.	12/2/14	YES	4	1	3	2	5	6		2	1	3	4	5	6		15	40	15	25	3	2		100
62	Mktg. Dir.	12/19/14	YES	3	2	4	1	5	6		2	1	3	4	5	6		15	35	15	20	10	5		100

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63 VP Mktg.	12/22/14	YES	3	1	4	2	5	6	2	1	3	4	5	6	20	40	10	20	5	5	100
64 Mktg.	12/2/14	YES	3	1	4	2		5	2	1	3	4		5	10	40	10	35		5	100
65 GM	12/5/14	YES	2	1	4	3		5	2	1	4	3		5	20	50	10	10		10	100
66 Dir. Video Prod.	12/9/14	YES	4	1	2	5	3	6	2	1	3	4	5	6	15	35	20	15	10	5	100
67 Executive Director	12/17/14	YES	3	1	2	4		5	1	2	3	4		5	10	40	25	20		5	100
68 VP and GM	12/8/14	YES	5	3	6	2	1	4	2	1	3	4	5	6	15	25	10	25	20	5	100
69 VP	12/8/14	YES	4	1	5	2	3	6	2	1	4	3	5	6	15	30	10	20	20	5	100
70 VP and GM	12/8/14	YES	5	2	4	1	3	6	2	1	3	4	5	6	15	35	5	25	15	5	100
71 VP	12/8/14	YES	4	1	5	2	3	6	2	1	4	3	5	6	15	30	10	20	20	5	100
72 VP	11/23/14	YES	3	1	2	4	5	6	2	1	3	4	5	6	15	45	20	10	10	0	100
73 Mktg.	12/10/14	YES	3	1	4	2		5	2	1	3	4		5	10	45	10	30		5	100
74 VP	11/25/14	YES	3	1	2	4	5	6	2	1	3	4	5	6	15	35	20	15	5	10	100
75 GM	11/17/14	YES	3	2	4	1		5	2	1	4	3		5	20	35	15	20		10	100
76 Mktg.	12/5/14	YES	3	2	4	1		5	2	1	3	4		5	30	30	5	30		5	100
77 Mktg.	12/5/14	YES	3	2	4	1		5	2	1	3	4		5	30	30	5	30		5	100
78 VP	12/3/14	YES	2	1	4	3	5	6	2	1	4	3	5	6	15	50	10	15	5	5	100
79 Mktg.	11/24/14	YES	3	2	1	5	4	6	2	1	3	4	5	6	10	40	20	10	15	5	100
80 VP and GM	12/3/14	YES	2	1	3	4	5	6	2	1	3	4	5	6	15	45	15	15	5	5	100
81 VP	1/27/15	YES	4	2	3	1	5	6	2	1	3	4	5	6	15	30	10	35	8	2	100
82 GM	2/3/15	YES	2	1	4	3	5	6	2	1	3	4	5	6	15	50	10	15	5	5	100
83 GM	1/8/15	YES	2	3	1	5	4	6	2	1	3	4	5	6	20	30	15	15	15	5	100
84 Dir. Mktg.	1/9/15	YES	1		2	3	4	5	1		2	3	4	5	30		30	25	10	5	100
85 Dir. Mktg.	1/13/15	YES	3	1	4	2		5	2	1	4	3		5	20	40	10	25		5	100
86 Dir. Mktg.	1/13/15	YES	3	1	5	2	4	6	2	1	4	3	5	6	20	35	8	25	10	2	100
87 Dir. Mktg.	1/9/15	YES	2	1	3	4		5	2	1	4	3		5	25	45	10	15		5	100
88 VP	1/21/15	YES	4	1	3	2		5	2	1	4	3		5	15	40	10	25		10	100
89 VP	1/21/15	YES	4	1	3	2		5	2	1	4	3		5	15	40	10	25		10	100
90 Area VP	1/20/15	YES	3	2	4	1	5	6	2	1	3	4	5	6	25	35	5	25	5	5	100
91 Reg. Video Dir.	1/6/15	YES	2	1	4	3	5	6	2	1	3	4	5	6	20	35	15	15	10	5	100
92 Reg. Video Dir.	1/6/15	YES	2	1	3	4	5	6	2	1	3	4	5	6	20	35	15	15	10	5	100
93 Reg. Video Dir.	1/6/15	YES	2	1	4	3	5	6	2	1	3	4	5	6	20	35	15	15	10	5	100
94 Reg. Mktg. Dir.	2/5/15	YES	4	2	5	1	6	3	2	1	3	4	5	6	20	25	10	25	10	10	100
95 Dir. Mktg.	2/11/15	YES	2	1	4	3	5	6	3	1	4	2	5	6	15	40	10	25	5	5	100
96 Dir. Mktg.	2/11/15	YES	2	1	4	3	5	6	3	1	4	2	5	6	15	40	10	25	5	5	100
97 Dir. Mktg.	2/12/15	YES	2	1	4	3	5	6	2	1	3	4	5	6	10	55	5	20	5	5	100
98 Mktg.	2/12/15	YES	2	3	5	1		4	2	1	4	3		5	20	30	10	30		10	100
99 Mktg.	2/12/15	YES	2	3	4	1	5	6	2	1	4	3	5	6	20	30	15	25	10	0	100
100 Dir. Prod. Mktg.	1/30/15	YES	2	1	3	4		5	2	1	3	4		5	15	55	10	15		5	100
101 GM	1/14/15	YES	2	1	5	3		4	2	1	4	3		5	15	35	10	30		10	100
102 VP and GM	1/26/15	YES	4	2	3	1		5	2	1	3	4		5	10	35	15	35		5	100
103 VP and GM	2/7/15	YES	4	1	3	2	6	5	2	1	3	4	5	6	15	35	15	15	10	10	100
104 VP and GM	2/7/15	YES	2	1	4	3		5	2	1	3	4		5	25	30	15	25		5	100
105 GM	1/17/15	YES	4	1	3	2	6	5	2	1	3	4	5	6	15	30	15	25	10	5	100
106 GM	2/3/15	YES	3	1	4	2		5	2	1	3	4		5	20	35	15	20		10	100
107 GM	2/11/15	YES	3	1	4	2	6	5	1	2	4	3	5	6	20	35	10	25	5	5	100
108 VP	12/9/14	YES	3	1	5	2	4	6	2	1	3	4	5	6	10	60	5	15	5	5	100
109 Telcom Manager	3/6/15	YES	3	2	1	4	5	6	2	1	3	4	5	6	15	40	20	15	5	5	100
110 Sr. Dir. Prod.	2/25/15	YES	3	2	4	1	5	6	2	1	4	3	5	6	15	35	10	25	10	5	100
111 GM	3/4/15	YES	3	2	4	1	5	6	3	1	2	4	5	6	15	40	20	15	5	5	100
112 GM	3/3/15	YES	3	2	4	1		6	2	1	4	3		6	20	35	15	20		5	100
113 VP Mktg.	3/11/15	YES	2	1	3	4	6	5	1	2	3	4	5	6	20	35	15	10	10	10	100
114 Mktg.	10/14/14	YES	4	3	2	1		5	2	1	4	3		5	15	30	10	40		5	100
115 Reg. GM	12/17/14	YES	3	2	4	1	5	6	2	1	3	4	5	6	15	35	5	35	5	5	100
116 VP/Marketing Director	12/22/14	YES	3	1	4	2	5	6	2	1	3	4	5	6	20	40	10	20	5	5	100
117 GM	11/12/14	YES	3	2	6	1	5	4	2	1	3	4	5	6	15	30	5	30	10	10	100
118 Reg. Prog. Dir.	10/7/14	YES	2	1	4	3	6	5	2	1	4	3	6	5	20	45	5	20	5	5	100
119 Area Manager	9/23/14	YES	3	1	4	2	5	6	1	2	3	4	5	6	15	30	10	20	15	10	100
120 Gvt Relations	9/15/14	YES	5	2	4	3	1	6	2	1	3	4	5	6	15	25	10	20	20	10	100
1 GM	11/6/14	YES	3	1	4	2		5	3	1	4	2		5	5	50	5	35		5	100
2 GM	11/5/14	YES	4	2	3	1		5	4	1	3	2		5	10	35	10	40		5	100
3 Area VP	10/9/14	YES	3	1	4	2		5	2	1	3	4		5	10	43	20	23		4	100
4 Video Spec.	10/22/14	YES	4	1	3	2		5	2	1	3	4		5	10	45	10	30		5	100
5 VP	11/21/14	YES	3	1	2	4		5	3	1	2	4		5	10	50	20	15		5	100

## JSC 00008183 2013 Redacted.xlsx (Excerpt Showing Bortz Survey Respondent Constant Sum Valuation Information)

6 Regional VP	11/5/14	YES	4	1	3	2	5	3	1	4	2	5	5	50	10	30	5	100
7 VP and GM	12/2/14	YES	3	1	4	2	5	2	1	4	3	5	5	50	15	25	5	100
8 Group Mktg.	11/25/14	YES	5	3	4	1	2	2	1	4	3	5	10	40	10	30	10	100
9 Mktg.	12/2/14	YES	5	1	3	2	4	2	1	3	4	5	10	55	10	25	0	100
10 Dir. Video Prod.	12/9/14	YES	4	1	3	2	5	3	1	2	4	5	10	55	15	15	5	100
11 Dir. Video Prod.	12/9/14	YES	4	1	3	2	5	3	1	2	4	5	10	55	15	15	5	100
12 GM	12/8/14	YES	2	1	4	3	5	2	1	3	4	5	10	60	10	20	0	100
13 NA	11/20/14	YES	4	2	5	1	3	1	2	3	4	5	5	45	10	35	5	100
14 GM	11/17/14	YES	4	3	2	1	5	3	1	2	4	5	10	30	25	25	10	100
15 Mktg.	12/10/14	YES	4	1	3	2	5	1	2	3	4	5	10	40	20	30	0	100
16 Mktg.	11/24/14	YES	3	1	4	2	5	2	1	3	4	5	15	45	15	20	5	100
17 Prog.	11/27/14	YES	4	1	3	2	5	2	1	3	4	5	10	50	15	25	0	100
18 Mktg.	2/3/15	YES	3	1	4	2	5	2	1	3	4	5	10	55	10	20	5	100
19 GM	1/27/15	YES	2	1	5	3	4	2	1	4	3	5	10	70	5	5	10	100
20 Sr. Dir. Prod.	1/6/15	YES	3	1	4	2	5	2	1	3	4	5	5	55	10	25	5	100
21 Dir. Progr.	2/5/15	YES	4	1	2	3	5	2	1	3	4	5	15	50	10	20	5	100
22 GM and Prod. Mgmt.	1/30/15	YES	4	1	3	2	5	2	1	3	4	5	10	50	10	25	5	100
23 VP and GM	2/11/15	YES	4	1	3	2	5	2	1	3	4	5	10	50	15	25	0	100
24 Reg. Dir.	2/5/15	YES	5	2	4	1	3	2	1	3	4	5	10	45	10	25	10	100
25 GM	2/3/15	YES	4	1	5	2	3	1	2	3	4	5	10	35	25	25	5	100
26 Reg. Mktg. Dir.	1/7/15	YES	3	2	4	1	5	2	1	3	4	5	15	45	5	35	0	100
27 VP and GM	1/7/15	YES	4	3	2	1	5	2	1	4	3	5	10	40	15	30	5	100
28 Dir. Mktg.	1/9/15	YES	4	2	3	1	5	3	1	4	2	5	15	45	20	20	0	100
29 Dir. Mktg.	1/9/15	YES	4	3	2	1	5	3	1	4	2	5	15	45	20	20	0	100
30 Prog./Gvt Relations	1/15/15	YES	4	2	3	1	5	2	1	4	3	5	10	55	15	20	0	100
31 Video Product.	3/17/15	YES	3	2	4	1	5	2	1	3	4	5	10	45	15	25	5	100
32 VP and Manager	2/26/15	YES	4	1	3	2	5	2	1	3	4	5	10	50	15	25	0	100
33 VP and Manager	3/2/15	YES	4	1	3	2	5	2	1	3	4	5	10	40	15	25	10	100
34 Director	3/9/15	YES	3	1	4	2	5	2	1	3	4	5	15	45	15	25	0	100
35 Sr. Dir. Prod.	2/25/15	YES	3	1	4	2	5	2	1	4	3	5	10	50	15	25	0	100
36 GM	3/4/15	YES	3	2	4	1	5	3	1	2	4	5	10	40	20	20	10	100
37 VP and GM	2/12/15	YES	3	1	2	5	4	2	1	3	4	5	10	45	20	20	5	100
38 VP and Regional Manager	2/23/15	YES	5	2	3	1	4	2	1	3	4	5	10	35	10	35	10	100
39 Video Product.	2/24/15	YES	4	2	3	1	5	2	1	4	3	5	10	35	20	25	10	100
40 VP and GM	3/25/15	YES	3	1	2	4	5	2	1	3	4	5	10	50	20	20	0	100
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Howard Horowitz

Before the  
COPYRIGHT ROYALTY JUDGES  
Washington, D.C.

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In the Matter of )

Distribution of the )

2010, 2011, 2012, and 2013 )

Cable Royalty Funds )

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Docket No. 14-CRB-0010-CD (2010-13)

REBUTTAL TESTIMONY OF  
HOWARD HOROWITZ

SEPTEMBER 15, 2017

**HOWARD HOROWITZ**  
**2010-13 CABLE REBUTTAL TESTIMONY**

**I. Introduction**

I am the Founder and Chief Executive Officer of Horowitz Research, Inc. ("Horowitz Research"), a firm based in New York specializing in market research since its inception in 1985. For over thirty years, I have advised many major media companies, including Multichannel Video Programming Distributors ("MVPDs"), cable systems, television networks, developers of interactive applications, Internet companies and other content providers on assessing the impact on consumers of new technological developments and increased competition in the marketplace. Recently, my work has also focused on trade and consumer research in the areas of digital media, including broadband and mobile content, services and technologies. My industry research has helped to support the evolution of programmed cable television in the United States.

Here, and throughout this document, I will make reference to my direct testimony submitted to the Copyright Royalty Judges ("Judges") on December 22, 2016 and corrected on April 25, 2017 ("Direct Testimony" or "Horowitz WDT"). On page 1-2 of that testimony, I provide a more detailed description of my experience and expertise.

**II. Purpose of Testimony**

I understand that this proceeding concerns the allocation of royalties deposited with the Copyright Office by cable system operators ("CSOs") for the royalty years, 2010, 2011, 2012, and 2013, for the privilege of retransmitting broadcast television signals out of their local market areas. I also understand that the standard for allocating the royalties is the relative market value of the different types of the non-network programming aired on the CSO-retransmitted signals in terms of its power to attract and retain subscribers.

In prior proceedings, the decision makers have relied on, among other methods, the results of surveys presented by Bortz Media and Sports Group, Inc. ("Bortz") on behalf of the Joint Sports Claimants ("JSC") (the "Bortz Survey"). That survey asked respondents to allocate a fixed budget amount among program categories specified in the Bortz Survey questionnaire.

The decision makers then relied on the results of the Bortz Survey to approximate the allocation of royalties among the defined groups of claimants that represented the program categories in the proceeding.

We carefully designed our cable operator survey which covered the 2010, 2011, 2012, and 2013 royalty years ("2010-13 Horowitz Survey" or "Horowitz Survey"), to replicate the methods and procedures of the Bortz Survey that was prepared for the 2005 royalty year and presented during the 2004-2005 Cable Phase I Proceeding ("2004-05 Bortz Survey").<sup>1</sup> Our task was to improve upon the 2004-05 Bortz Survey by solving some of its information and category weaknesses that were noted by the Judges in the 2004-2005 Cable Phase I Proceeding.

In my Direct Testimony, I described in detail the particular ways in which the Horowitz Survey improved upon the 2004-05 Bortz Survey. In this proceeding, Bortz, through the Written Direct Testimony of James M. Trautman ("Trautman WDT"), has presented a report titled "Cable Operator Valuation of Distant Signal Non-Network Programming: 2010-2013" ("2010-13 Bortz Survey"). This latest report identifies purported improvements and changes to the 2004-05 Bortz Survey questionnaire to fix weaknesses. In this rebuttal testimony, I do the following: 1) assess the so-called improvements made to the 2010-13 Bortz Survey over the 2004-05 Bortz Survey; and 2) compare the 2010-13 Bortz Survey to the 2010-13 Horowitz Survey (much like I did in my earlier testimony comparing the Horowitz Survey to 2004-05 Bortz Survey).

I conclude that the changes to prior Bortz surveys incorporated into the 2010-13 Bortz Survey 1) have distracted survey respondents from the purpose of allocating a fixed budget in relation to subscriber acquisition and retention by leaving out all references to subscriber value, which is still considered the "primary consideration" for allocating value,<sup>2</sup> 2) introduced even more bias in favor of the programming claimed by JSC than even the 2004-05 Bortz Survey questionnaire by changing the frame of reference for the survey from "relative value" to "relative cost," and by not providing representative examples of programs to compare to "live professional and college team sports;" and 3) made the 2010-13 Bortz Survey unreliable by asking

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<sup>1</sup> The Bortz Survey program categories were based on program categories defined and agreed upon by long-time participants in royalty distribution proceedings. See Trautman WDT, Appendix A at A-7-8. The categories are not reflective of how cable systems operators view or organize program content for acquisition purposes.

<sup>2</sup> See *id.* at 40.



respondents about how much they would spend on disaggregated content, which requires an expertise and experience that we cannot assume of respondents. Finally, having assessed the overall effectiveness of the latest version of the Bortz Survey, I conclude that the Horowitz Survey faithfully replicated the methodology, data-collection and sampling procedures of the Bortz Survey, and that the questionnaire used in the Horowitz Survey remains a better survey instrument when compared to the purportedly improved 2010-13 Bortz Survey. Therefore, if the Judges decide to continue to rely on the constant-sum allocation of value by CSOs, they should rely on the 2010-13 Horowitz Survey.

### III. Comparing the 2010-13 Bortz Survey with the 2004-05 Bortz Survey.

The 2010-13 Bortz Survey identified the following as improvements to the 2004-05 Bortz Survey:

- 1) Development of a WGN Programming Summary that was provided to only Bortz Survey respondents who carried only WGNA as their distant signal ("WGN- only") in advance of the interview;<sup>3</sup>
- 2) Limitation of the number of distant signals that Bortz Survey respondents were asked about to a maximum of 8 signals;
- 3) Sampling enhancements;<sup>4</sup>
- 4) Revised introductory questions;
- 5) Revised constant sum question.

I examine some of these changes for their probable intent, actual implementation, and the most likely effect on the 2010-13 Bortz Survey results.

- 1) *Development of a WGN Programming Summary that was provided to Bortz Survey WGN-only respondents in advance of the interview.*

In the 2004-05 Bortz Survey questionnaire, the program category represented by JSC was labeled "live professional and college team sports" and the program categories represented by

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<sup>3</sup> During the 2010-13 time frame, CSOs who carried WGN as a distant signal carried the superstation feed, called WGNA. For ease of reference herein, I refer to WGN and WGNA collectively as WGN.

<sup>4</sup> Although Bortz suggests that enhancements were made to its sample, it appears that these so-called enhancements were due to increased industry consolidation and other market factors more than a change in Bortz's sampling methodology. See Trautman WDT at 38. I understand that Dr. Joel Steckel addresses this issue in his rebuttal testimony.

the Program Suppliers were referred to as “syndicated shows, series, and specials” and “movies.” These program category labels were provided to Bortz Survey respondents without any explanation or representative examples of programs associated with those labels. As I explained in my Direct Testimony, failure to provide explanation or examples throughout the Bortz Survey was an error. Without representative examples of programs in the Bortz Survey questionnaire there is built in bias in favor of JSC-represented, and against Program Suppliers-represented, content. For example, live professional basketball, football and baseball games and similar college sports are more self-descriptive and thus more easily recognizable as contained within the “live professional and college team sports” programming, even without any mention of the league acronyms (such as NBA, NFL, MLB or NCAA). By contrast, generic labels of Program Suppliers’ programming as “syndicated series” or “movies” do not connote the distinction or breadth of the types programming that fall within those labels. In my opinion, such generic labeling would tend to undervalue the programming in those categories. In addition, introducing the “Other Sports” category in the Horowitz Survey, with its program examples, reduces the bias against Program Suppliers and creates a much needed distinction between JSC-represented and Program Suppliers-represented sports programs.<sup>5</sup>

The 2010-13 Bortz Survey changed its approach with regard to program examples in a limited way by providing each WGN-only respondent with a written WGN Programming Summary in advance of the interview, which contained program examples for some categories of programming. According to Bortz, the WGN Programming Summaries were intended to weed out non-compensable WGN programming from consideration by Bortz Survey respondents (especially such content falling within the program categories represented by Program Suppliers and Devotional Claimants).<sup>6</sup> Notwithstanding its limited inclusion of program examples, however, the WGN Programming Summary provided to certain respondents in the 2010-13 Bortz Survey exacerbates the bias toward JSC by providing name-brand examples of certain JSC content on WGN, such as the Chicago Cubs and White Sox baseball and Bulls basketball teams, while failing to provide comparable examples of compensable Program Suppliers content on

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<sup>5</sup> Compare Horowitz WDT at 16 and Trautman WDT at 42.

<sup>6</sup> See Trautman WDT at 30. Curiously, it is only in this instance that Bortz and the JSC contend that program examples are necessary to inform survey respondents. Otherwise, Bortz rejects the use of examples as prejudicial and not informative, suggesting that the Bortz categories as presented are “readily understood” by cable industry professionals. See *id.*, Appendix A at A-8.

WGN. For example, in the Bortz 2010 WGN Programming Summary, not one specific movie title is mentioned *at all*,<sup>7</sup> when the actual compensable movie titles on WGN that royalty year include well known content such as *No Country For Old Men*, *The Matrix*, *Bridget Jones's Diary*, and *The Sixth Sense*.<sup>8</sup> Failing to include these movie titles while including name-brand examples of JSC-represented sports teams biases the WGN Programming Summary against Program Suppliers.

2) *Limitation of the number of distant signals that Bortz Survey respondents were asked about to a maximum of 8 signals.*

In the 2010-13 Bortz Survey, the survey interviewers could only ask respondents about up to 8 television signals, even if the respondents carried more signals.<sup>9</sup> According to Bortz, the limitation affected 17% of the cable systems in the Bortz Survey sample.<sup>10</sup> However, it is clear that this limitation impacted as much as 24% of Bortz Survey respondents, depending on the royalty year at issue.<sup>11</sup> The Trautman WDT suggests that excluding some distant signals from consideration by Bortz Survey respondents is justified in light of system consolidation, which Bortz claims led to greater numbers of distant signals carried by some systems, and an increase in the number of partially distant signals. However, these arguments are insufficient to justify excluding from consideration content of distant signals carried by Bortz respondents that are valid members of the random samples. The removal of certain distant signals prevents Bortz respondents from valuing compensable content in their survey valuations. Even worse, the suggestion that Bortz respondents would have been overwhelmed by being asked to assess the value of the content on *all* the distant signals they carried seriously calls into question whether they could have accurately estimated their cost allocation among program categories.

Consolidation and centralization have led to CSO's decision makers' increased responsibility for more systems, and decisions increasingly removed from the local cable system. In turn, CSO

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<sup>7</sup> The Bortz 2010 WGN Programming Summary instead identifies compensable movies as "Feature Presentation" and "Feature Prime Presentation." See Trautman WDT, Appendix C, at C-5.

<sup>8</sup> All of these movie examples appeared in the 2010 Horowitz Survey questionnaire for WGN-only systems.

<sup>9</sup> See *id.* at 31-36.

<sup>10</sup> See *id.* at 35.

<sup>11</sup> See *id.* at 36 (acknowledging that 21 cable systems responding to the Bortz Survey in 2010, 28 responding in 2011, 29 responding in 2012, and 39 responding in 2013 carried nine or more distant signals, and thus "were not asked about all the distant signals that they carried.").

respondents are forced to consider allocation of value of programming categories for more systems and channels beyond, perhaps, their ability to recall or know about each market situation. Thus, the complications and changes in the industry referenced by Bortz do not justify its decision to exclude certain signals from consideration, and instead may call into question the reliability of using a survey of CSOs as a means of allocating value.

3) *Revised Introductory Questions.*

The Trautman WDT describes changes to the introductory survey questions in the 2010-13 Bortz Survey as designed “to focus more directly on the issues linked to relative value and to use a ranking structure in order to yield responses that provided a stronger indication of relative value perceptions.”<sup>12</sup> In my opinion, however, the changes to the introductory questions distracted respondents from considering a) relative value by focusing them, instead, on relative cost; b) the requirement to allocate value in relation to subscriber attraction and retention; and c) any additional assessments of value such as advertising and promotion. For example, in the 2010-13 Bortz Survey, Bortz replaced a question that asked respondents to identify the programming that is “most popular” with *subscribers* with a question that asked respondents to rank the compensable programming on distant signals “in order of their importance to your *system* in [royalty year].” Surprisingly, there is no reference at all to subscribers, who should be the core focus, and no explanation provided for leaving them out and substituting them with an undefined and amorphous reference to “system” value. The question could easily have been phrased to ask respondents to “rank relative importance to your subscribers or to a broader but specified reference to value,” but it was not. Further, starting in 2010, Bortz apparently omitted the introductory question that asked respondents whether they used distant signal programming in their advertising and promotional efforts, and, if so, which programming.<sup>13</sup> This omission is puzzling, especially given the Judges’ concern that there are additional measures of value that should also be considered in addition to the core mandate of subscriber value.

The most detrimental change to the 2010-13 Bortz Survey, however, is the addition of introductory question 3, which asked respondents to rank the seven program categories in

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<sup>12</sup> See Trautman WDT at 39-40.

<sup>13</sup> See *id.* at 39.

relation to how “expensive you think it would have been for your system to acquire the non-network programming on the broadcast stations,” key portions of which are as follows:

Next, I’m going to ask you how expensive you think it would have been for your system to acquire the non-network programming on the broadcast stations I listed...if your system had to purchase that programming directly in the marketplace. I will read the seven categories....to give you a chance to think about their relative cost. ....please rank...in order of how expensive each would have been to your system.

This introductory question about expense is a serious distraction from consideration of relative value because estimating expense is clearly not the same as estimating value. As such, this change does nothing to “focus more directly on issues linked to relative value.”<sup>14</sup> Indeed, the opposite is the implication of this change.

When considering these significant changes to the 2010-13 Bortz Survey that distract respondents from considering value, it is also important to note that the references to “importance” (Bortz question 2) and “cost” (Bortz question 3) are made without any examples provided of the branded content in each of the categories. As mentioned earlier, using generic program category labels without supporting program examples results in bias in favor of JSC-represented programming and against Program-Suppliers-represented programming due to respondents’ greater familiarity with professional and college sports brands, and the likelihood to overvalue the JSC-represented program category. The lack of examples impairs reliability on the results to these questions.

4) *Revised Constant Sum Question.*

In response the Judges’ criticism in their 2004-05 Cable Distribution Order citing the need to consider additional factors in connection with assessing relative value, the 2010-13 Bortz Survey revised the singular question on which both the Bortz and 2010-13 Horowitz Surveys rely to allocate value – the constant sum question. In the 2004-05 Bortz Survey, the constant sum question asked respondents to assess the different programming categories in terms of their relative value in “attracting and retaining subscribers.” In the 2010-13 Bortz Survey, however, the constant sum question was changed to omit any reference to subscriber value at all. Rather,

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<sup>14</sup> See *id.* at 39.

it “ask[s] respondents simply to estimate the relative value to their cable system of each type of programming...”<sup>15</sup> The change was ostensibly done to “...broaden the valuation factors considered by respondents to encompass not just subscriber acquisition and retention (which we would expect to remain their primary consideration in thinking about programming value).”<sup>16</sup> It is not credible, however, to argue that changing the specific reference which links value to “attracting and retaining subscribers” to a reference which links value to the “cable system” broadens the scope of value. The replacement language obfuscates the direct meaning of the question and does nothing to focus the respondent on any specific measure of value, let alone the “primary consideration” of attracting and retaining subscribers. Providing a term with no operational meaning constricts rather than “broadens” the meaning. The resulting allocation is therefore unreliable for lacking a specific frame of reference.

More problematic is the 2010-13 Bortz Survey’s treatment of the “money” question in question 4a (the constant sum question). While the prefatory statement to the constant sum question states “[n]ow I would like you to estimate the relative value to your cable system of each category of programming,” the actual constant sum question then directs the respondents to perform the allocation exercise as follows:

Assume your system spent a fixed dollar amount...to acquire all the non-network programming.... What percentage, if any, of the fixed dollar amount would your system have spent for each category of programming?

There are several problems with the new constant sum question: a) it does not reference the relative value of compensable programming carried by the respondents; b) it presumes that “relative value” is the same as amount “spent”; and c) it no longer references attraction and retention of subscribers.

The inconsistency between the preliminary introduction referring to value and the latter part of the question referring to spending leave it unclear what question the respondent is answering. Aside from the confusion, the inference inherent in the question that “relative value” and amount “spent” are the same requires expertise that is outside the purview of the respondents. Moreover, omission of the reference to “acquiring and retaining subscribers,”

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<sup>15</sup> See *id.* at 40.

<sup>16</sup> See *id.*

which is supposedly of primary consideration for the survey, raises questions about the relevance and reliability of the results.

As with the other revisions to the Bortz Survey, the omission of program examples from the constant sum question is all the more likely to prejudice the survey towards JSC content when the focus shifts from “relative value” to “relative expense” as is done throughout the Bortz Survey.

#### **IV. Comparison of the 2010-13 Bortz Survey with the 2010-13 Horowitz Survey.**

Horowitz Survey sets itself apart from the 2010-13 Bortz Survey by providing greater clarity in the following respects:

- Creating the separate “Other Sports” category to distinguish between sports programming that should be categorized as Program Suppliers’ (such as NASCAR auto races, professional wrestling, and figure skating) versus sports programming that should be categorized as JSC;
- Providing warmup questions to better elicit well-reasoned, non-reflexive responses as opposed to the new warm up questions in the 2010-13 Bortz Survey that focus on expense and omit value;
- Enhancing the understanding of the program category definitions with representative program examples and customizing the survey questionnaire to focus only on content on distantly retransmitted signals actually carried by respondent’s system (including tailoring questionnaires for CSOs that carry WGN-only, PBS-only, and Canadian-only stations as distant signals);
- Providing examples of compensable programs for the pertinent program categories to all respondents, including a customized list in WGN-only markets, to reduce respondents’ bias (unlike the inaccurate and prejudicial WGN Programming Summary provided only to WGN-only 2010-13 Bortz Survey respondents);

- Treating, in a statistically equitable manner, all CSOs carrying distant signals, including Canadian- and PTV-only systems, as opposed to arbitrary capping the signals inquired about, and exclusion of PTV-only and Canadian-only signals from the survey; and
- Using a constant sum question that clearly, precisely and comprehensively defined what is meant by “relative value to your cable system,” (*i.e.*, “all the factors...advertising and promotion...attract and retain subscribers, ...importance to you and your subscribers...and any other considerations...”), and which more clearly addresses the mandate of the Judges.
- Repeatedly reminding the respondents of the distant signals that the CSO actually carried throughout the interview; and
- Reminding respondents not to assign any value to programs that are substituted for WGN’s blacked out programming.
- Consistently referencing subscriber value (the mandate for allocation) and instructing respondents to take into account “all the factors we have been discussing including using this programming in advertising and promotions to attract and retain customers, the importance of this programming to you and your subscribers and by any other consideration you may have.”

**V. Conclusion: The 2010-13 Horowitz Survey is a Better Survey Than the 2010 -13 Bortz Survey.**

The 2010-13 Bortz Survey’s failure to include a separate “Other Sports” category is a fatal flaw. As evidenced by the data from my Direct Testimony, including an “Other Sports” category in the Bortz Survey would very likely have produced different results for the Program Suppliers and JSC categories that are in line with the 2010-13 Horowitz Survey findings.

In addition, the provision of representative programming examples in the 2010-13 Horowitz Survey is extremely important to correct for the bias inherent in the 2010-13 Bortz Survey that compares “live professional and college team sports” with no-name movies and programs, which is particularly egregious in the WGN Programming Summary provided to WGN-only Bortz Survey respondents.



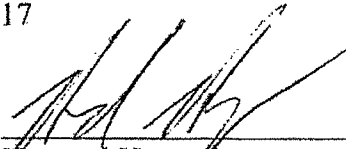
Finally, the consistent frame of reference provided in 2010-13 Horowitz Survey in all questions to “the value to subscribers or the value to acquire or retain subscribers” is very much in line with the criterion and mandate of the Judges in allocating value in these proceedings, and hence royalties. The 2010-13 Bortz Survey, as well as earlier versions, consistently obfuscates any reference to (and connection with) subscribers.

As stated above, the 2010-13 Horowitz Survey was designed to replicate the methods and procedures of the 2004-05 Bortz Survey but solve some of its information and category weaknesses that were noted by the Judges in the 2004-2005 Cable Phase I Proceeding. The 2010-13 Horowitz Survey faithfully replicates the methodological data-collection and sampling procedures of the 2004-05 Bortz Survey, and sets itself apart from the Bortz Survey by improving on the 2004-05 Bortz Survey questionnaire as described above. Moreover, in my opinion, the Horowitz Survey questionnaire is a better survey instrument than the 2010-13 Bortz Survey questionnaire. Based on my assessment of the efficacy (or the lack thereof) of the purported improvements to the 2010-13 Bortz Survey as detailed above, it is my opinion that if the Judges decide to continue to rely on the constant-sum allocation of relative value by CSOs, they should rely on 2010-13 Horowitz Survey.

**DECLARATION OF HOWARD HOROWITZ**

I declare under penalty of perjury that the foregoing testimony is true and correct,  
and of my personal knowledge.

Executed on September 13, 2017

  
\_\_\_\_\_  
Howard Horowitz



Before the  
COPYRIGHT ROYALTY JUDGES  
Washington, D.C.

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In the Matter of )

Distribution of the )

2010, 2011, 2012, and 2013 )  
Cable Royalty Funds )

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Docket No. 14-CRB-0010-CD (2010-13)

REBUTTAL TESTIMONY OF  
JOEL STECKEL, PH.D.

SEPTEMBER 15, 2017

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## REBUTTAL TESTIMONY OF JOEL STECKEL Ph.D.

### **I. Background**

#### *A) Qualifications*

I am a Professor of Marketing, Vice Dean for Doctoral Education, and the Acting Chairperson of the Accounting Department, all at the Leonard N. Stern School of Business, New York University. I have previously supplied direct testimony for *In The Matter of the Distribution Of The 2010, 2011, 2012, and 2013 Cable Royalty Funds* proceedings (“2010-13 Proceedings”).<sup>1</sup> My professional qualifications were detailed in that testimony.

#### *B) Summary Of My Prior Direct Testimony*

In my direct testimony, I provided a professional opinion on the validity of the cable operator surveys conducted by Bortz Media & Sports Group, Inc. (“Bortz survey”) and Horowitz Research, Inc. (“Horowitz survey”) as the bases for determining the allocation of royalties in this proceeding. My overarching conclusions in that direct testimony were:

1. Neither the Bortz survey nor the Horowitz survey is sufficiently capable of assisting the Judges in determining the relative market value of the programming at issue in this proceeding;
2. While neither the Bortz survey nor the Horowitz survey provides a sufficient basis for measuring marketplace value, the Horowitz survey does overcome some of the flaws in the Bortz model, thus making it preferable to the Bortz survey;
3. Surveys of cable operators are inadequate in general for measuring marketplace value or return; and
4. At least two other research approaches would provide data more useful for assessing

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<sup>1</sup> Direct testimony of Joel Steckel, Ph.D. dated December 22, 2016 (“Steckel direct testimony”).

marketplace return: (1) analysis of market data, and (2) surveys of cable *customers*.<sup>2</sup>

Because the materials I have reviewed since that testimony was submitted largely center around purported improvements to the Bortz survey, this rebuttal testimony will focus primarily on issues related to the (updated) Bortz survey. I will not focus on either the Horowitz survey or the superiority of approaches other than surveys of cable operators. None of the materials I have reviewed since the submission of my original testimony changes the opinions I presented there.

## II. Purpose Of Testimony

I have been asked by the Motion Picture Association of America, Inc. ("MPAA") and its represented Program Suppliers in the 2010-2013 Proceedings to provide rebuttal testimony with regard to the following:

- Written Direct Testimony of James M. Trautman, dated December 22, 2016, including the attached report entitled "Cable Operator Valuation of Distant Signal Non-Network Programming: 2010-13," by Bortz Media & Sports Group, Inc. ("Trautman testimony");
- Written Direct Testimony of Nancy A. Mathiowetz, Ph.D., dated December 22, 2016 ("Mathiowetz testimony"); and
- "The Value of Canadian Programming to Cable Systems in the United States in 2010, 2011, 2012, and 2013" by Gary T. Ford and Debra J. Ringold, dated December 2016 ("Canadian study").

In particular, I have been asked to: (1) consider whether the changes to the Bortz survey submitted for the 2010-13 Proceedings alleviate any concerns I expressed in my direct testimony about prior versions of the Bortz survey; (2) determine whether testimony given by Dr. Nancy

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<sup>2</sup> *Id.*

Mathiowetz gives me confidence in the updated version of the Bortz survey; and (3) determine whether the study performed by the Canadian claimants impacts my opinions about the updated Bortz survey.

The Trautman testimony, submitted on behalf of the Joint Sports Claimants ("JSC"), presents an updated version of the Bortz survey that I commented on in my direct testimony. It describes the changes that were made in the design of the survey and presents the results of the implementation in conjunction with the current proceedings. The Mathiowetz testimony uses Professor Shari Diamond's "The Reference Guide on Survey Research," one of the chapters of the *Reference Manual on Scientific Evidence*,<sup>3</sup> as a framework for reviewing the updated Bortz methodology.<sup>4</sup> The Canadian study presents research designed "to estimate the value of Canadian programming on Canadian distant signals retransmitted by Form 3 cable system operators in the United States"<sup>5</sup> and "to determine the relative importance of other types of programming on three different types of distant signals: superstations or TBS;<sup>6</sup> Canadian stations; and United States independent stations."<sup>7</sup>

## II. Summary Of Conclusions

The Trautman testimony, Mathiowetz testimony, and Canadian study, as well as testimonies in prior proceedings, implicitly or explicitly, assume that surveying cable operators is an appropriate way to derive a basis for allocating royalties in these proceedings. Nothing in these materials even considers the possibility of other methodologies. As such, the arguments

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<sup>3</sup> Diamond, Shari S., "Reference Guide on Survey Research," *Reference Manual on Scientific Evidence*, Third Edition, Federal Judicial Center, 2011, pp. 359-422.

<sup>4</sup> Mathiowetz testimony, p. 5. I note that the Diamond chapter is the only scholarly work Dr. Mathiowetz refers to and she uses it only as a framework to organize her presentation. She does not use it to support any of her arguments.

<sup>5</sup> Canadian study, p. 4.

<sup>6</sup> I understand that TBS was formerly a superstation and is now a cable network. In the Canadian study, TBS programming was used to reduce the chances that survey respondents would guess the survey's purpose or sponsor. See Canadian study, p. 4.

<sup>7</sup> *Id.*



leading to my fourth conclusion above remain unchallenged by new testimony. My opinion remains that two other research approaches would provide data more useful for assessing marketplace return: (1) analysis of market data such as actual viewership, and (2) surveys of cable *customers*. Furthermore, I note that the only relationship between the recently reviewed materials and my direct testimony on the Horowitz study lies in the differences between the Bortz and Horowitz studies that were incorporated in the Canadian study. As such, my belief of the superiority of the Horowitz study relative to the Bortz study remains, and, the current materials reinforce that belief. More specifically, the Canadian study implemented some of the differences the Horowitz study incorporated.

With respect to the main thrust of the three sets of materials I reviewed, I have the following overarching opinions:

1. The changes made to the Bortz study in its current incarnation do not address the concerns I raised in my direct testimony.
2. The changes made to update the Bortz survey do little to improve the survey, and may have a negative effect on the reliability and validity of the responses provided to the Bortz survey questions.
3. As a matter of science, the Bortz survey is not capable of assisting the Copyright Royalty Judges ("Judges") in determining the relative market value of the programming at issue in this proceeding.
4. Dr. Mathiowetz's support of the current Bortz survey is not based on any literature, research, or analysis. The substantiation for her opinion is little more than her own unsupported assertions.

5. While the Canadian survey suffers from many of the same flaws as the Bortz survey, it does represent at least two major improvements in that it reduces ambiguity and simplifies the respondent's task. Notwithstanding, the Canadian study, like the Horowitz and Bortz surveys, remains unfit for the task at hand.

### III. The (Updated) Bortz Survey

As has been the case in the past, the updated Bortz survey was designed to aid the Judges in determining "the relative market value of the different categories of programming."<sup>8</sup> The survey asks "a random sample of cable operators how they would allocate a fixed budget among the different 'non-network' programming categories on the distant signals they actually carried in the relevant year."<sup>9</sup> Throughout previous proceedings, the Judges have levied several criticisms against the Bortz survey. In response to those criticisms, Bortz has modified the most recent incarnations (2010-2013) of the survey. Mr. Trautman and Dr. Mathiowetz testify that these modifications address the criticisms.

In my direct testimony, I levied several criticisms of prior renditions of the Bortz survey. As I explain below, the recent modifications do not address those criticisms. In fact, in some cases, those modifications even make the survey worse. My direct testimony has already outlined the structure of the Bortz survey. Therefore, I will proceed directly to the aforementioned modifications.

#### A) *Changes To The Bortz Survey*

The 2010-2013 Bortz surveys differ from prior ones in the following ways:

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<sup>8</sup> Trautman testimony, p. 1.

<sup>9</sup> *Id.*

(i) Including Only Compensable Programming On WGN

Historically, Bortz had asked respondents to evaluate the programming on WGN without informing them that some WGN programming was not entitled to receive royalties. For respondents whose systems retransmitted WGN programming as the only distant signal, the recent surveys attempted to focus respondents' attention on only the compensable WGN programming that the respondent's system retransmitted.<sup>10</sup>

(ii) Reducing Large Numbers of Distant Signals Asked About

The Trautman testimony cites concerns about the ability of respondents to evaluate the different categories of distant signal programming in instances where there were large numbers of (nine or more) distant signals retransmitted.<sup>11</sup> After citing data that cable systems often carry signals that are distant only to a small fraction of subscribers, Bortz modified the survey to ask respondents only about the eight most widely carried distant signals. The implication is that this modification would simplify respondents' task without losing much information.

(iii) Eliminating The Sports Programming Question

Bortz attempted to verify carriage of live professional and college team sports (*i.e.*, JSC) programming in advance of completing the surveys. When such carriage could not be verified, Bortz excluded the live professional and college team sports category as an option for respondents.<sup>12</sup> In effect, Bortz modified the sports programming question (by selectively removing it from consideration) without acknowledging that some sports would not fall into the category (*e.g.*, NASCAR, Olympic skating, sports program shows, track and field, etc.). Thus, they left respondents with the ambiguity of how to handle these non-JSC sports. Such a decision could only benefit the JSC sponsor as either (i) respondents lumped such non-JSC sports with the

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<sup>10</sup> *Id.*, p. 30.

<sup>11</sup> *Id.*, p. 31.

<sup>12</sup> *Id.*, p. 37.

JSC sports in providing their allocation; or (i) respondents would re-allocate the amount that they would have devoted to the non-JSC sports to the various categories thereby increasing the allocations to each of them (including live team sports).

(iv) Better Coverage Through Stratified Sampling

According to the Trautman testimony, industry consolidation has enabled a larger proportion of total royalties to be accounted for by the largest systems.<sup>13</sup> Trautman claims that the Bortz surveys have benefitted by allowing the stratified sample to encompass a larger proportion of the total royalties paid by Form 3 systems.<sup>14</sup> In my view, Trautman has mischaracterized this as an 'improvement' in the Bortz survey methodology because there have been no changes to the methodology.<sup>15</sup>

(v) Changing The Surveys' Introductory Questions

Supposedly, in order to make the introductory questions more related to the objectives of the survey, Bortz changed its introductory questions. The previous Bortz survey questionnaire had asked respondents a) to identify the programming on the distant signals carried that were "most popular" and b) whether they used any distant signal programming in their promotional efforts.<sup>16</sup> After the Judges raised issues about the connection of these questions to the issue of relative value, Bortz decided to incorporate a ranking structure in their introductory questions in order to yield responses that Bortz believed would provide a stronger indication of relative value perceptions. That is, respondents were asked to rank the distant signal programming types in terms of both relative importance and relative cost to the system.<sup>17</sup>

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<sup>13</sup> *Id.*, p. 38.

<sup>14</sup> *Id.*

<sup>15</sup> *See id.* p. 24, title to Trautman testimony, Section III, 2010-13 Improvements in Survey Methodology.

<sup>16</sup> *Id.*, p. 39.

<sup>17</sup> *Id.*

(vi) Removing The Phrase “Attracting And Retaining Subscribers”  
From The Constant Sum Question

In their 2004-05 Distribution Order, the Judges stated that while attracting and retaining subscribers played a role in determining relative value, other factors might be at play.<sup>18</sup> In response, Bortz removed the sentence containing the phrase “attracting and retaining subscribers” from the constant sum question, which now states: “(n)ow, I would like you to estimate the relative value to your cable system of each category of programming actually broadcast by the stations I mentioned during 20[XX], excluding any national network programming from ABC, CBS, and NBC....Assume your system spent a fixed dollar amount in 20[XX] to acquire all non-network programming actually broadcast in 20[XX] by the stations I listed. What percentage, if any, of the fixed dollar amount would your system have spent for each category of programming?”<sup>19</sup>

*B) Dr. Mathiowetz’s Endorsement*

JSC asked Dr. Mathiowetz, to render an opinion on the 2010-2013 Bortz surveys.<sup>20</sup> Her overarching opinion is “that the 2010-13 Bortz Surveys provide a valid and reliable assessment of the relative market value of the different categories of distant signal programming that cable systems carried during the years 2010-13.”<sup>21</sup> Her analysis is contained in Section IV of her testimony.

In Section IV.A of her testimony, entitled “Purpose and Design of Survey,” Dr. Mathiowetz writes, “I believe that the 2010-13 Bortz surveys are designed to address the relevant

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<sup>18</sup> *Id.*, p. 40.

<sup>19</sup> *Id.*, Appendix B, at B-5. Prior versions of the Bortz constant sum question read as follows: “Now, I would like you to estimate the relative value to your cable system of each type of programming actually broadcast by the stations I mentioned during 20[XX], other than any national programming from ABC, CBS, and NBC. That is, how much do you think each such type of programming was worth if anything, on a comparative basis, in terms of attracting and retaining subscribers.” See “Cable Operator Valuation of Distant Signal Non-Network Programming: 2004-05,” June 1, 2009 (“2004-05 Bortz Report”), Appendix B.

<sup>20</sup> Mathiowetz testimony, para 3, p. 2.

<sup>21</sup> *Id.*, para. 4, p. 2.

question of interest, specifically, the relative value associated with specific categories of distant signal programs. These surveys continue (and improve upon) previous surveys conducted by Bortz and relied on by the [Judges] and their predecessors in rendering decisions concerning copyright royalty distributions.”<sup>22</sup> She does not describe how the surveys address the relative value of specific categories. She does not explain how the survey questions (which focus on resource allocation) relate to value. She refers to no scholarly work or analysis of her own. Indeed, she makes the statement as if she expects the reader to accept her opinion simply because she says so. As I discuss below in the section on construct validity, I disagree.

Dr. Mathiowetz goes on to testify, “[t]he questions used in the 2010-13 Bortz Surveys are clear and objective and relevant to the issue at hand.”<sup>23</sup> Again, she makes this statement without explanation, analysis, or reference. The closest she comes to offering support is noting that “[f]or over thirty years, Bortz has been engaged in the design and analysis of surveys presented to the [Judges] and their predecessors.”<sup>24</sup> Such a statement is not expert. It is a casual observation that anyone can make. Furthermore, experience with Bortz does not guarantee its infallibility. As described in my analysis below, I disagree with Dr. Mathiowetz about the clarity and relevance of the questions used in the survey.

In section IV.B of her testimony, Dr. Mathiowetz endorses the population definition and sampling. From my perspective, her comments on the population definition are appropriate. However, I will refrain from commenting on the sampling as I understand there are still some unresolved issues related to discovery.<sup>25</sup>

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<sup>22</sup> *Id.*, para. 11, p. 5.

<sup>23</sup> *Id.*, para. 12, p. 6.

<sup>24</sup> *Id.*, para. 13, p. 6.

<sup>25</sup> I understand that Program Suppliers filed a motion seeking to compel production of documents related to the Bortz survey, and that that motion remains pending. *See* Program Suppliers Motion To Compel Production Of Unredacted Documents And Data From The Joint Sports Claimants (filed April 27, 2017).

Dr. Mathiowetz then proceeds to discuss the implementation of the survey in section IV.C. Here she focuses on possible biases in the sample as reflected in response rates. The high response rates are encouraging, and I agree that nonresponse bias is unlikely, although she could have conducted formal tests to confirm that conclusion. In Section IV.D of her testimony, Dr. Mathiowetz goes through five of the six so-called improvements to the Bortz survey that reflected actual changes. As I read her testimony, it is similar to that of much of the first three sections. All she does is repeat what Bortz did and what Bortz offered as the justifications for what it did. Again, without any additional analysis or reference to scholarly work, she states that “[e]ach of these changes..., *in my opinion*, improved the survey instruments and resulted in questions that were clear, precise, and unbiased,”<sup>26</sup> with no other basis than she said so. Although she cites to testimony of others in justifying the use of the constant sum technique, she offers no incremental insight of her own except to say, “...*in my opinion*, the constant sum methodology is an appropriate methodology when asking respondents to determine relative value of...specific categories of programming.”<sup>27</sup>

To be fair, Dr. Mathiowetz does acknowledge that the current version of the Bortz survey does not completely solve the WGN problem. She notes that the “change has no impact on those cable systems for whom WGN is one of several distant signals purchased.”<sup>28</sup> In fact, as I show later, the so-called WGN improvement is limited, as it applies to fewer than one-half of the Form 3 systems that carry WGN as a distant signal—about a quarter to one-third of all cable systems.<sup>29</sup>

In Section IV.E, Dr. Mathiowetz addresses data collection. Here she simply states, again without any justification other than she says so, “[t]he use of a telephone for data collection is an

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<sup>26</sup> Mathiowetz testimony, para. 27, p. 10 (emphasis added).

<sup>27</sup> *Id.*, para. 33, p. 12 (emphasis added).

<sup>28</sup> *Id.*, para. 39 n.8, p. 15.

<sup>29</sup> I received data regarding the number of cable systems carrying WGN and the number of WGN-only systems for each of the 2010-13 cable royalty years from Cable Data Corporation (“CDC WGN Analysis”).

appropriate mode, especially for an establishment survey.”<sup>30</sup> As is clear from my direct testimony, I strongly disagree. Moreover, Dr. Mathiowetz’s statement is very general, and does not state specifically that the use of a telephone was appropriate for *this* survey. Even if one were to accept her general statement at face value, surely one would agree that the researcher must choose the appropriate mode for each specific survey; *i.e.*, that the telephone would not necessarily be the best choice for *all* enterprise surveys.

Finally, Section IV.F of Dr. Mathiowetz’s testimony repeats arguments advanced earlier as to why all of the raw data from the Bortz survey should not be given to other parties. I have already articulated my disagreement with her arguments.<sup>31</sup> Her testimony here does nothing to refute my arguments, and I stand by them.

Going forward, Section IV.D on the survey instrument is probably the most critical for my rebuttal testimony for two reasons. Much of my direct testimony focused on the survey instrument and the alleged improvements in the Bortz methodology also centered on the survey instrument.

#### **IV. The Changes In The 2010-2013 Bortz Surveys Not Only Fail To Cure The Problems Of Prior Versions Of The Bortz Surveys, They Actually Introduce New Ones.**

In my direct testimony, I testified that any survey based on cable system operators was inadequate for the purposes of assisting the Judges in determining the relative market value of the programming at issue in this proceeding. Above and beyond those, I also provided two categories of reasons as to why the Bortz survey in particular was especially flawed, invalid, and unreliable: lack of construct validity and questions too difficult for the respondent to understand and answer in a valid manner. With regard to construct validity, I concluded as follows:

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<sup>30</sup> Mathiowetz testimony, para. 42, p. 16.

<sup>31</sup> See Program Suppliers’ Reply In Support Of Motion To Compel Production Of Unredacted Documents And Data From The Joint Sports Claimants at Exhibit B (Steckel Decl.) (May 18, 2017).



- i. The Bortz survey objectives do not match the statutory requirements.
- ii. The constant sum resource allocation in the money question is ambiguous.

Furthermore, that ambiguity introduces inconsistencies in the unit of analysis and biases results in favor of smaller cable system operators.

- iii. The constant sum resource allocation in the money question does not elicit data that correspond to the relative market value question.

With regard to the difficulty of the questions, I concluded as follows:

- i. The Bortz survey format asks respondents to focus on an artificial construct and presume an activity that they do not engage in and that does not exist in their daily business activities.
- ii. The constant sum money question is too complex to produce valid data.
- iii. Constant sum questions, in general, do not reflect real world behavior.
- iv. The Bortz survey should not be administered by telephone.

I discuss both of these categories of conclusions in more detail below as applied to the updated Bortz survey.

*A) The (Updated) Bortz Survey Still Lacks Construct Validity.*

Construct validity refers to the question of whether the survey measure is designed to measure what it is supposed to.<sup>32</sup> The Bortz survey has always presented, and still presents, a fundamental mismatch between the foundation of resource allocations and market value. In my direct testimony I presented a stylized example demonstrating that this is true.<sup>33</sup> The Trautman testimony cites a third concept that my direct testimony did not consider, "what cable systems would have paid, on a relative basis, for the different types of compensable programming on the

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<sup>32</sup> Hoyle, Rick H., Monica J. Harris, and Charles M. Judd (2002), *Research Methods in Social Relations*, Independence, KY: Wadsworth, p. 32.

<sup>33</sup> Steckel direct testimony, pp. 26-28.

However, neither the Trautman nor the Mathiowetz testimony cites what those factors might be and appears to take the Judges' observation simply at face value.

The Judges stated as follows:

The rationale for the cable operator's decision concerning which channels to group in any tier offering and at what price, may depend not only on the impact on direct subscriber revenues, but also on such factors as advertising revenues associated with cable network channels, the relative license fee costs of various cable network channels, physical capacity constraints on the number of channels that can be transmitted over a particular cable system and even the direct ownership interests of the cable system in programming content on a given cable network.<sup>39</sup>

However, these factors are essentially all captured by "attracting and retaining subscribers." The ultimate purpose of investing in acquisition of new programming can *only* be to make the cable system more attractive to current and potential customers. The other reasons the Judges offer are subordinate and contribute to the primary goal of attracting and retaining subscribers adjusted for costs to increase profits. The better a system attracts and retains subscribers, the more advertising revenue it gets. The physical capacity constraints do not detract from the central importance of attracting and retaining subscribers; they merely suggest that you can only choose the signals that deliver the highest profits (which come from attracting and retaining subscribers). The only factor that does not clearly fit under the umbrella of attracting and retaining subscribers is "direct ownership interests." I do not know what those interests could be, but the greatest interest ownership should have is to attract and retain subscribers to increase profits.

Cable systems receive the financial return and generate the cash flows that are the basis for inferring relative value from attracting and retaining subscribers. Removing that phrase from the question makes it less focused and therefore injects an element of ambiguity. Ambiguity

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<sup>39</sup> *Distribution of the 2004 and 2005 Cable Royalty Funds*, 75 Fed. Reg. 57063, 57066 (September 17, 2010).

destroys construct validity. If different respondents interpret a question differently, the aggregate response would have no meaning at all.

One change in the Bortz survey that does attempt to bring it closer to having construct validity is to have respondents consider only compensable programs on WGN. To the extent that prior (and current) versions of the Bortz survey include non-compensable programming on WGN, construct validity is violated as the allocations to the categories of programming on WGN would be over-weighted. The attempt to correct this for WGN only systems is a positive step, but a small one. The problem remains for non-WGN-only systems, which comprise over half of the Form 3 systems that carry WGN as a distant signal during the period from 2010 to 2013. The proportions of non-WGN-only Form 3 systems among all WGN-carrying Form 3 systems during the time period ranged from a minimum of 54.7 percent in the first accounting period of 2010 to a maximum of 61.1 percent in the second accounting period of 2011.<sup>40</sup> Bortz's WGN problem remains for well over half of the systems that carry WGN as a distant signal.

In sum, the threats to construct validity cited in my direct testimony not only remain as a result of the changes to the Bortz survey, they may have been exacerbated.

*B) The Questions in the (Updated) Bortz Survey are Still too Difficult for Respondents to Answer.*

I began my direct testimony on this issue by pointing to the fact that the Bortz survey asks respondents to focus on an artificial construct and presume an activity (that they make decisions on which program categories – and not stations – to invest in) that they do not engage in and that does not exist in their daily business activities. Such a construction does not allow for a respondent to draw on any experiences in memory upon which s/he based a judgment and formed a response. Any judgments or responses obtained about such a context cannot be

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<sup>40</sup> See CDC WGN Analysis.

considered reliable. Nothing has been done in updating the Bortz survey to address this issue. Therefore, my direct testimony opinion on this issue remains.

In my direct testimony, I also pointed out that the complexity of the process required to form the judgments requested by Bortz, Bortz's use of constant sum questions, and Bortz's use of the telephone as the mode of data collection, all contributed to the difficulty of obtaining reliable responses from the cable system operator respondents.

(i) The Complexity of the Judgment Process

I previously outlined the following multistep process that respondents had to go through in order to answer the money question 4 in the earlier Bortz survey;<sup>41</sup>

- i) Recall the station(s) carried by the cable system
- ii) Recall all types of programming offered by the station(s) from short term memory;
- iii) Mentally separate out, from programming to be valued, all programming on ABC, CBS, and NBC networks, remember that Fox is not considered a network for compulsory license purposes, and separate out WGNA programming from WGN since only simultaneously retransmitted programs on WGNA are compensable;
- iv) Organize the remainder of the programming on the stations carried into the program categories required by the survey;<sup>42</sup>

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<sup>41</sup> Steckel direct testimony, pp. 29-30.

<sup>42</sup> Further, the respondent must try to keep in mind that for sports in general, the respondent has to dissect even further to distinguish those sports that belong within the syndicated programs (Program Suppliers) group and those that belong within live professional and college team sports (JSC). See Steckel direct testimony, p. 38.

- v) Identify from the types of programming organized in item iv) the particular ones that were featured in subscriber acquisition and retention, advertising and promotion;
- vi) Retrieve all programming acquisition costs for the relevant year from short term memory;
- vii) Map the unit of acquisition (*e.g.* channel or network) to the categories of programming offered;
- viii) Allocate the costs in step vi) according to the map derived in step vii);
- ix) Add up the costs in step vi) or step viii);<sup>43</sup>
- x) Divide each of the costs in step vii) by the total in step ix); and
- xi) Review steps i) – x) as demanded by question 4b.

Some of the updates to the Bortz survey did attempt to simplify the judgmental processes respondents needed to go through. However, they have little to no effect. In fact, any effect may be counterbalanced by unintended side effects.

First, the elimination of the “subscriber acquisition and retention” phrase removes the need for step v). However, this created additional ambiguity as I discuss above.

Second, limiting the number of distant signals to eight is of no significant help. It has long been known that the working memory humans possess has limited capacity. In one of the most cited articles in the history of psychology, George Miller highlighted a seven-item limitation of working memory.<sup>44</sup> The magic number seven is the upper limit of the *number of chunks of information* a person can possibly hold in working memory at the same time. A *chunk* is a *unit* of some kind. It could be a letter, a word, a short sentence, or in this case, a

<sup>43</sup> These totals should be the same since one is simply a reallocation of the other.

<sup>44</sup> Miller, George (1956), “The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information,” *Psychological Review*, Vol. 63 (2), pp. 81-97.

distant signal. One can think of it as a box or container in memory that holds other information. Miller's work examined short-term memory tasks and found that typical subjects could hold at most seven chunks in memory at once. Even if everything else in the Bortz survey were up to par (which it is not), eight is still too high an upper bound. In other words, the updated Bortz survey still allows for respondents to be placed in situations that exceed the normal capacity of human working memory.

Third, Bortz changed the introductory questions of the survey from ones that asked respondents to identify the most popular programming on distant signals and what types of distant signal programming (if any) they used in their promotional efforts to ones that attempt to focus directly on the issue of relative value. Dr. Mathiowetz argues that these questions "serve as useful primers for the respondent, discussing the program categories that are of interest for the key question, that is, the relative value question (Question 4 in the survey)."<sup>45</sup> This is a misleadingly simplistic viewpoint.

I have often used introductory questions in my own surveys to get respondents thinking about the subject matter at hand before presenting them with what I have called the money question and what Dr. Mathiowetz calls the key question. This equips the respondent with a more appropriate mindset. I call them "warm-up" questions. However, the new questions do not warm up the respondent to get him/her into the appropriate mindset. They dive right in, and attempt to elicit the same information as the (old and updated) money question. The only difference between the new introductory question 3 and question 4 (the money question) is that the new introductory question attempts to elicit the information along an ordinal scale as opposed to a ratio scale. Given that the only differentiation is the level of scale, one would expect the rank correlation between responses to the two questions to be a perfect 1.0 for each and every

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<sup>45</sup> Mathiowetz testimony, para. 29, p. 11.

respondent. Anything short of that is an indication of respondent inconsistency and a lack of reliability in the data collected.

An analysis of the respondent data demonstrates significant respondent inconsistency, demonstrating that the data lack reliability.<sup>46</sup> In fact, as the following table shows, only 23 out of the 654 respondents whose data were provided to me exhibited the expected result. One respondent had a correlation as low as 0.36. Almost half exhibited a rank correlation below 0.9.

<i>YEAR</i>	<i>NUMBER OF RESPONDENTS</i>	<i>NUMBER OF 1.0 CORRELATIONS</i>	<i>MINIMUM CORRELATION</i>	<i>NUMBER OF CORRELATIONS LESS THAN 0.9</i>
<b>2010</b>	163	13	.36	64
<b>2011</b>	161	8	.63	52
<b>2012</b>	170	0	.47	104
<b>2013</b>	160	2	.48	98
<b>TOTAL</b>	<b>654</b>	<b>23</b>		<b>318</b>

The results in the table above demonstrate substantial inconsistency in responses to the two questions that should have been perfectly correlated by design. Recall that the intent of question 3 was to focus on resource allocations. These inconsistencies can only lead to one conclusion. The responses to the key question, question 4, in the updated Bortz survey are not reliable, are invalid, and cannot be relied upon as inputs to any additional analysis.

Also, focusing all questions in a survey in the same direction, as the survey now does, opens the door to possible demand effects. Demand effects occur when respondents attempt to pick up subtle cues in the researcher's behavior, the task, or the setting to infer what the researcher wants. Respondents then use this as guidance for their own behavior in the study, and answer questions according to their perceptions of what is demanded. In other words, they try to make the research come out right.

The (updated) Bortz survey is transparent with respect to the focus of the question it is

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<sup>46</sup> This analysis was performed under my direction by personnel at Charles River Associates.

addressing—relative importance, expense, and value. This invites speculation as to what the researcher wants. Dr. Mathiowetz is correct in emphasizing the importance of the interviewers not knowing the sponsor in order to reduce the possibility of demand effects.<sup>47</sup> However, it does not eliminate the possibilities that respondents will attempt to guess.<sup>48</sup> Bortz's revisions makes this process easier. Such an effect contaminates any responses recorded.

In sum, the so-called improvements to the Bortz survey at best do little to alleviate the complexity of the cognitive process required of respondents in answering the money question. As described in my direct testimony, respondents will still need to satisfice and look for shortcuts to reduce the cognitive effort used for interpreting the questions and formulating easily defensible answers. Furthermore, it is just as likely that those "improvements," with the exception of the limited WGN fix, actually render the responses given to the money question less valid.

ii) Constant Sum Questions

Constant sum scales are relatively popular because they are simple to implement. However, that does not make them reliable or valid. In my direct testimony, I cited some recent evidence that questions their predictive validity.<sup>49</sup> Despite this evidence, and without citing any evidence of her own, Dr. Mathiowetz claims that "the constant sum methodology is an appropriate methodology when asking respondents to determine relative value of various...categories of programming."<sup>50</sup> Although she warns that "the constant sum

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<sup>47</sup> Mathiowetz testimony, para. 43, p. 16.

<sup>48</sup> Dr. Mathiowetz, without explanation, simply dismisses the possibility of respondent guessing by stating that it is simply not relevant. *See id.*, para. 41 n.5, p. 10.

<sup>49</sup> Steckel direct testimony, p. 35-36.

<sup>50</sup> Mathiowetz testimony, para. 33, p. 12.



methodology can be burdensome to respondents if the number of categories is extensive,”<sup>51</sup> she believes that comparing seven is not “extensive” enough to be a problem. I disagree.

In my experience, the majority of constant sum questions I have encountered are paired comparisons; *i.e.*, allocations across two categories. A constant sum allocation across three categories is three times as complex as a paired comparison in that it involves three paired comparisons (A/B, A/C, and B/C). Extending this analysis shows that a constant sum allocation across four categories involves six paired comparisons (A/B, A/C, A/D, B/C, B/D, and C/D). I will not present the details but the complexity as reflected in the number of paired comparisons increases as follows: five categories require 10 paired comparisons; six categories require 15; seven categories require 21; and eight categories require 28. In other words, the task presented to respondents in the Bortz survey is 20 to 30 times more than the paired comparison which is the most common task in the literature in my experience.

Dr. Mathiowetz cites to various prior testimonies in justifying the use of the constant sum task.<sup>52</sup> However, those prior testimonies in turn cite to two “peer reviewed” published examples of the use of constant sum scales. One paper was published in the *Journal of Advertising Research* by one of JSC’s prior experts, Joel Axelrod, in 1968.<sup>53</sup> JSC’s experts repeatedly refer to this paper as “seminal.”<sup>54</sup> The second paper was published in the *Journal of Marketing* in 1979 by Russell Haley and Peter Case.<sup>55</sup> Neither of these papers describe using as many as seven categories in the constant sum tasks they employed in their studies. The Haley and Case paper is

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<sup>51</sup> *Id.*

<sup>52</sup> *Id.*, para. 34-35, p. 13.

<sup>53</sup> Axelrod, Joel N. (1968), “Attitude Measures That Predict Purchase,” *Journal of Advertising Research*, Vol. 8 (1), pp. 3-17.

<sup>54</sup> I do not agree that this paper is seminal in anyway. While the *Journal of Advertising Research* may be peer-reviewed, it is primarily targeted to practitioners. The peers who review the papers are practitioners who generally have much lower scientific standards than academics. In fact, the Axelrod paper is missing important details.

<sup>55</sup> Haley, Russell I. and Peter B. Case (1979), “Testing Thirteen Attitude Scales for Agreement and Brand Discrimination,” *Journal of Marketing*, Vol. 43 (Fall), pp. 20-32.

very clear in that their tasks use six categories. In contrast, the so-called seminal Axelrod paper is silent on how many categories were used in their studies.

Moreover, the task respondents face in Bortz survey question 4 (*i.e.*, allocating resources in an unfamiliar, ambiguous way across several systems), is much more complex than the simple purchase likelihood (Axelrod) and brand liking (Haley and Case) tasks used in the research referred to by JSC's experts.

Dr. Mathiowetz points to no evidence to support her assertion that the number of categories required by the Bortz survey is not extensive enough to cause a problem. I believe that it is indeed a problem, especially since working human memory can only handle up to seven chunks of information.<sup>56</sup>

iii) The Telephone As The Mode Of Data Collection

In my direct testimony, I stated that telephone surveys are inferior for complex questions or questions with significant numbers of response categories, and therefore are an inappropriate way to administer the Bortz survey questionnaire. I testified:

[S]urveys that contain complex questions and or large numbers of response categories benefit from written presentation to respondents. Written presentations enable respondents to focus and concentrate on what the question actually means and keep the response categories in mind while processing the question.<sup>57</sup>

Clearly, such a statement applies to the Bortz survey.

Dr. Mathiowetz apparently disagrees. She testifies that the use of the telephone ensures the identification of an appropriate respondent.<sup>58</sup> She also testifies that it is less costly than other

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<sup>56</sup> See *supra* at p. 18 (discussing Miller's seven-item limitation on working memory).

<sup>57</sup> Steckel direct testimony, p. 14 (citing Dillman, Don A., Jolene D. Smyth, and Leah Melani Christian (2009), *Internet, Mail, and Mixed Mode Surveys: The Tailored Design Method*, 3<sup>rd</sup> ed., New York: Wiley, p. 321).

<sup>58</sup> Mathiowetz testimony, para. 42, p. 16.

methods.<sup>59</sup> I agree with the latter argument. However, cost is not a reason to use a mode of data collection that compromises the reliability and validity of the data collected.

*C) Examining The Results Throughout Time*

In the Bortz report from the 2004-05 proceedings<sup>60</sup> and the Trautman testimony, we find the results for the Bortz allocations from 1998, 1999, 2004, 2005, 2010, 2011, 2012, and 2013.

These are assembled into the following Table:

	1998	1999	2004	2005	2010	2011	2012	2013
<b>Live Professional and College Team Sports</b>	37.0%	38.8%	33.5%	36.9%	40.9%	36.4%	37.9%	37.7%
<b>News and Public Affairs Programs</b>	14.8	14.7	18.4	14.8	18.7	18.3	22.8	22.7
<b>Movies</b>	21.9	22.0	17.8	19.2	15.9	18.6	15.3	15.5
<b>Syndicated Shows, Series, and Specials</b>	17.8	15.8	18.7	18.4	16.0	17.4	13.5	11.8
<b>PBS and All Other Programming on Non-Commercial Signals</b>	2.9	2.9	3.5	3.7	4.4	4.7	5.1	6.2
<b>Devotional and Religious Programming</b>	5.3	5.7	7.8	6.6	4.0	4.5	4.8	5.0
<b>All Programming on Canadian Signals</b>	0.4	0.2	0.2	0.3	0.1	0.2	0.6	1.2

It is apparent from the rows of the table above that the results of the Bortz surveys over a fifteen year time period exhibit only small amounts of variation of live professional and college team sports. There are two possible explanations for this. Either, the relative values of this

<sup>59</sup> *Id.*

<sup>60</sup> 2004-05 Bortz Report, Table I-2, p. 6 and Trautman testimony, Table 1-1, p. 3.

category remained stable over the 15-year period, or the Bortz survey is insensitive to changes in its relative value.

The testimony of MPAA's witness John Mansell suggests it is the latter. He testifies:

I have analyzed the changes in live professional and college team sports games on television. Based on that analysis,...the number of professional and college team sports games on cable networks and regional sports networks (RSNs) has dramatically increased. In effect, live professional and college team sports games in general, and JSC Sports programming in particular, have shifted dramatically from local over-the-air TV stations to regional sports networks and basic cable sports networks. Furthermore, the trend has accelerated since 2005 and there is no reason to believe that this trend will not continue.

By any measure, from 2005 through 2013, live regular season MLB, NBA, NHL and NCAA basketball and football games increasingly aired on cable TV national networks and RSNs, and not on broadcast television networks and local TV stations. In addition, since 2005, more MLB, NBA and NHL playoff games have migrated from national broadcast to national cable networks.<sup>61</sup>

Mansell's analysis demonstrates that the amount of sports programming available on distant signals has decreased dramatically, especially after 2005. Yet the results of the Bortz survey would suggest that it has not changed. The Bortz survey is no different than a scale that reads 150 lbs., no matter who steps on it. Undoubtedly the survey places respondents in such a difficult position that they have no choice but to satisfy and likely guess. These guesses are drawn randomly across years and converge to the same result.

**V. The Canadian Study Shares Many Of The Bortz Survey's Flaws. However, It Does Present At Least Two Significant Improvements.**

The Canadian Claimants submitted their own study, the Canadian study, in conjunction with the 2010-2013 Proceedings. Very similar in structure to the Bortz survey, the Canadian study had two objectives;

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<sup>61</sup> Testimony of John Mansell, 2010-2013 Copyright Royalty Distribution Proceeding, "The Migration of Live Team Sports Programming from Broadcast Television to Cable-Satellite TV," p. 4.

1. The primary objective of this research was to estimate the value of Canadian programming on Canadian distant signals retransmitted by Form 3 cable system operators in the United States; and
2. A second, and less important, objective was to determine the relative importance of other types of programming on three different types of distant signals: superstations or TBS; Canadian stations, and United States independent stations.<sup>62</sup>

The methodology was very similar to that of the Bortz survey. Both used the telephone to collect data, asked constant sum questions allocating over seven categories, allowed for ambiguity in "value", and requested a judgment that respondents did not have experience with and could not delve into their memory in order to help them formulate answers. For these reasons alone, I doubt the reliability and validity of the data it collected.

However, the Canadian study demonstrates two significant improvements over the Bortz survey. First, while the use of the word "value" is still ambiguous (*i.e.*, it may mean different things to different people—financial return to business people or the outcome of an arms length negotiation to the Judges), and therefore raises doubts about construct validity, its use in the Canadian study is at least consistent. Unlike the Bortz survey, the money question in the Canadian study does not arithmetically equate value with investment or resource allocations. The Canadian study constant sum question asks for an allocation according to value, not resources to be invested.

Second, while the Bortz survey requires respondents to present their constant sum allocations aggregated across all distant signals at once, the Canadian study asks for constant sum allocations for only one signal at a time. The latter judgment is much closer to the respondents' everyday experience in that they make decisions with respect to signals, not classes

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<sup>62</sup> Canadian study, p. 4.

of programs within signals. Isolating the components of a single signal is a much more manageable task for a cable system operator.

The Canadian study methodology is better, if not perfect. Its improvements produce very different results, thereby suggesting that the Bortz weaknesses they cure have very serious and deleterious effects in favor of the JSC. If the results of the Bortz survey were valid, one would not expect another study with improved (albeit not perfect) methodology to produce much lower estimates than Bortz for the value of Bortz's clients "relative value."

## **VI. Concluding Remarks**

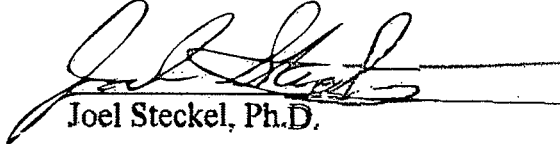
After submitting my direct testimony, counsel supplied me with the direct testimonies of James M. Trautman and Nancy A. Mathiowetz as well as a survey performed by the Canadian Claimants in the 2010-2013 Proceedings. In particular, the Trautman testimony described and presented the results of an updated Bortz survey. Dr. Mathiowetz testimony serves merely to put her own personal stamp of approval on that survey and its so-called improvements. The Canadian survey presents two additional allocations using a similar (but somewhat better) methodology.

Nothing in any of these documents eased my concerns over the Bortz survey I opined on in my direct testimony. The so-called improvements are at best minimal and have as much potential to weaken the survey as to strengthen it. Finally, even though the Canadian study has several of the same weaknesses the Bortz survey has suffered from, it does have two salient improvements that make it a step up from the Bortz survey.

DECLARATION OF JOEL STECKEL, PH.D.

I declare under penalty of perjury that the foregoing testimony is true and correct,  
and of my personal knowledge.

Executed on September 15<sup>TH</sup>, 2017

  
Joel Steckel, Ph.D.

Jeffery Stec, Ph.D.



Before the  
COPYRIGHT ROYALTY JUDGES  
Washington, D.C.

In the Matter of

Distribution of the

2010, 2011, 2012 and 2013 Cable  
Royalty Funds

Docket No. 14-CRB-0010-CD (2010-13)

REBUTTAL TESTIMONY OF JEFFERY A. STEC, Ph.D.

September 15, 2017

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## I. INTRODUCTION

I have been asked by the Motion Picture Association of America ("MPAA") and MPAA-represented Program Suppliers ("PS") to address the appropriateness of certain methodologies espoused by experts retained by the Joint Sports Claimants ("JSC"). These methodologies were proposed to allocate the 2010-13 cable royalty funds collected by the U.S. Copyright Office of the Library of Congress. More specifically, I was asked to address 1) the direct testimony of Dr. Michelle Connolly as it pertains to the economic appropriateness of the Bortz survey; and 2) the direct testimony of Dr. Mark A. Israel as it pertains to the economic appropriateness of his regression analysis.

## II. QUALIFICATIONS

I am a Vice President with Charles River Associates ("CRA"), an international economic consulting firm focused on advising clients and counsel in the areas of complex litigation and intellectual property matters in the context of economics, strategy, valuation, licensing, and litigation support services.<sup>1</sup>

I have served as a consultant for over 17 years to a wide variety of clients on matters involving economic, financial, and statistical analysis and modeling for the purpose of interpreting and projecting data and evaluating its impact on business decisions, transactions, and economic events. I have also served as an expert witness or consultant in a wide range of litigation matters, including economic matters pertaining to patent, copyright, trademark, and trade secret infringement litigations, as well as Section 337 investigations. While the issues have varied from case to case, most included an analysis and evaluation of company-specific as well as industry-wide data for the purpose of investigating economic issues and determining the extent of economic damages. In particular, I specialize in the application of economics and survey research to the valuation of various forms of intellectual property. My experience includes determining the value of intellectual property for the purposes of the sale or licensing of that intellectual property as well as the determination of the damages associated with the illegal use of the relevant intellectual property in the marketplace. Often, these types of analyses require the apportionment of profits associated with the components that utilize the intellectual property

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<sup>1</sup> See Exhibit 1 for my curriculum vitae. See also Exhibit 2 for my testimony experience.

from those components that do not for the purposes of determining the relative value of the intellectual property.

I received Ph.D. and Master's degrees in Economics from the Ohio State University. I received Bachelor of Arts degrees in Philosophy and Psychology from Cornell University and in Economics with a Math Minor from the University of Illinois-Chicago. I am a member of various professional organizations including the American Economic Association, the Intellectual Property Owners' Association, and the Licensing Executives Society, among others.

### **III. BACKGROUND**

#### **A. Section 111 of the Copyright Act**

##### **1. Summary of Section 111**

Section 111 of the Copyright Act governs the out-of-market retransmissions of broadcast signals by cable system operators ("CSOs"). Under Section 111, a CSO may transmit, free of liability for copyright infringement, broadcast signals outside the broadcast station's local service area.<sup>2</sup> To be eligible for the Section 111 statutory license, CSOs must complete semi-annual Statements of Account ("SOAs") and pay royalties based on a formula prescribed by the statute.<sup>3</sup> Section 111 royalties are intended to compensate copyright owners of the non-network programming on the broadcast signals retransmitted out of market by CSOs.<sup>4</sup>

##### **2. Compulsory Royalties under Section 111**

The intention of Section 111 is to "compensate program owners for [the] increased exposure of their works outside (*i.e.*, distant to) the area to which the program was originally licensed."<sup>5</sup> Because Congress decided "that it would be impractical and unduly burdensome to require every cable system to negotiate with every copyright owner whose work was

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<sup>2</sup> See 17 U.S. Code § 111 – "Limitations on exclusive rights: Secondary transmissions of broadcast programming by cable." The clauses listed in the below paragraphs are an overview of Section 111 and should not be interpreted as a complete representation of the law.

<sup>3</sup> See 17 U.S. Code § 111(d).

<sup>4</sup> See Direct Testimony of Marsha E. Kessler, 2004-2005 Copyright Royalty Distribution Proceeding, Corrected September 28, 2009, p. 8 ("Kessler WDT").

<sup>5</sup> See *id.* at p. 8.

retransmitted by a cable system,”<sup>6</sup> Congress imposed regulations on the retransmissions marketplace instituting the compulsory license framework set forth in Section 111. That regulatory framework is meant to simplify the compensation of program owners by avoiding transactions costs being incurred by the relevant parties every time a station is retransmitted out of market by a CSO.<sup>7</sup> However, the tradeoff for the avoidance of numerous individual transactions costs is the regulated market in which there are no arms-length transactions from which to derive the value of a particular distant signal or the relative value of particular programs that are part of the retransmitted signal.<sup>8</sup>

The base for the Section 111 royalties is determined by the gross receipts of CSOs, which are calculated by the cable systems every six months in their SOAs deposited with the Register of Copyrights.<sup>9</sup> Gross receipts are amounts received by the cable systems from subscribers “for the basic service of providing secondary transmissions of primary broadcast transmitters.”<sup>10</sup>

For the purpose of calculating royalty obligations, the CSOs are classified into three categories - Forms 1, 2, and 3 – based on the systems’ gross receipts. Form 1 systems (typically, small systems) pay a flat royalty fee and did so during 2010-13. Form 2 systems (mid-size systems) pay a percentage of their gross receipts and did so during 2010-13. Form 3 systems, the large systems, and the category of systems focused on by Drs. Connolly and Israel in their analyses, pay royalties based on a combination of graduated percentages of their gross receipts and the total value of their distant signal equivalent units (“DSE”). A DSE is “the value assigned to the secondary transmission of any non-network television programming carried by a cable

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<sup>6</sup> See Pallante, Maria A (2011). *Satellite Television Extension and Localism Act: A Report of the Register of Copyrights*. United States Copyright Office, p.1.

<sup>7</sup> See Written Testimony of Jeffrey S. Gray, Ph.D., December 22, 2016, Amended March 9, 2017, Corrected April 3, 2017, pp. 2-3 (“Gray WDT”).

<sup>8</sup> In order for program owners to be eligible for compensation, the retransmission of the distant signal bearing their non-network content must be simultaneously retransmitted by the CSO at the same time that the broadcast is aired in the local market. Further, CSOs may not alter the content of the retransmitted signal. See Statement of Account: SA3 (Long Form), General Instructions for SA3 (Long Form), pp. ii-iii.

<sup>9</sup> See 17 U.S. Code § 111(d). There are exceptions when the full amount of gross receipts are not used as a royalty base. See, for example, 17 U.S. Code § 111(d) (1) (E). Gross receipts received by satellite carriers are not included in the calculation of the royalty base for Section 111 royalties. See, 17 U.S. Code § 119.

<sup>10</sup> See 17 U.S. Code § 111(d).

system in whole or in part beyond the local service area of the primary transmitter of such programming.”<sup>11</sup>

Each distantly retransmitted independent station carries a value of one, while each distantly retransmitted network station or noncommercial educational station receives a value of one-quarter.<sup>12</sup> DSEs with a fractional value use the fractional value in the computation of the royalty rate.<sup>13</sup> The base royalty obligation of a CSO is determined by the total DSE value of the stations carried by the CSO and the applicable percentage of gross receipts as follows:<sup>14</sup>

- 1.064% of gross receipts multiplied by 1 (representing the first DSE).
- 0.701% of gross receipts multiplied by 3 (representing the second, third, and fourth DSEs).
- 0.330% of gross receipts multiplied by X (representing the fifth distant signal equivalent and each DSE thereafter).

The structure of these compulsory royalties requires each Form 3 CSO to pay a minimum royalty fee equivalent to 1 DSE regardless of whether the CSO retransmits any distant signals. There are two additional categories of royalty fees – the 3.75% Fee and the Syndicated exclusivity Surcharge – which I understand resulted from changes to rules promulgated by the Federal Communications Commission.<sup>15</sup>

#### **B. Willing Buyer and Willing Seller Theory**

The parties agree that the relative market value standard represents the basis upon which the Judges should allocate the 2010-13 royalty funds.<sup>16</sup> The Copyright Royalty Judges

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<sup>11</sup> See 17 U.S. Code § 111(f) (5) (A) (i).

<sup>12</sup> See 17 U.S. Code § 111(f) (5) (A) (ii). Primary transmissions include primary streams and multicast streams, but not simulcast streams.

<sup>13</sup> See 17 U.S. Code § 111(d) (1) (C) (i).

<sup>14</sup> See 17 U.S. Code § 111(d) (1) (B) (ii)-(iv).

<sup>15</sup> See Kessler WDT at pp. 18-22.

<sup>16</sup> See Written Direct Statement Regarding Allocation Methodologies of Program Suppliers, Volume I of II, December 22, 2016, p. 4. See also Written Direct Statement of The Joint Sports Claimants, December 22, 2016, pp. 2-3. See also Cable Operator Valuation of Distant Signal Non-Network Programming: 2010-13, Bortz Media & Sports Group, Inc., December 22, 2016, p. 1 (“Bortz Survey”). See also Written Direct Testimony of Dr. Mark A.

("Judges") have relied on this theory in past proceedings.<sup>17</sup> In the context of this proceeding, it is the relative market value of programming on the different types of retransmitted distant signals that is at issue.<sup>18</sup> The relative market value of the retransmitted distant signal programming is the price at which it would be exchanged between a willing buyer and a willing seller in a free market (*i.e.*, absent compulsion).<sup>19</sup> In the context of this proceeding, the willing buyer is represented by the CSOs, and the willing seller is represented by the copyright owners.

The difficulty with allocating royalties based on the relative market value standard is that the royalties paid by the CSOs are based on a regulatory-prescribed formula. The carriage of distant signals is regulated. The distant signal is also comprised of a bundle of several different types of programming. CSOs do not purchase distant signal programming by the programming categories identified in this proceeding (*i.e.*, syndicated television shows, movies, sports, *etc.*). The most appropriate transactions to determine the relative market values of the program categories would be free market transactions between CSOs and copyright owners for distinct program types (not bundled programs or bundled signals). However, as explained, those transactions are unavailable.

As a result, there are no market transactions that are consummated under a willing buyer/willing seller paradigm incorporating arms-length negotiations that can provide the relative market value of different categories of programming. Consequently, JSC have put forth two different approaches that attempt to determine the relative market value of various categories of programming.

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Israel, December 22, 2016, pp. 7-8 ("Israel WDT"). *See also* Written Direct Testimony of Michelle Connolly, Ph.D., December 22, 2016, p. 4 ("Connolly WDT").

<sup>17</sup> *See* Federal Register, Volume 75, No. 180, September 17, 2010, p. 57065.

<sup>18</sup> I understand that there are eight types of programming for the purposes of this proceeding: Canadian Claimants, Commercial Television Claimants, Devotional Claimants, Joint Sports Claimants, Music Claimants, National Public Radio, Program Suppliers, and Public Television Claimants. *See* Notice of Participant Groups Commencement of Voluntary Negotiation Period (Allocation), and Scheduling Order (November 25, 2015), p. 1 and Exhibit A.

<sup>19</sup> This is consistent with the Supreme Court's definition of fair market value: "The fair market value is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts." *United States v. Cartwright*, 411 U.S. 546, 551 (1973).

### C. Summary of the Bortz Survey

Since there are no unregulated market transactions for the different types of distant signal programming, JSC commissioned a survey from Bortz Media & Sports Group, Inc. ("Bortz") as a means by which to determine the relative market value of the different program categories for purposes of the royalty allocation in this proceeding. However, due to several flaws with the Bortz survey, it fails to provide any meaningful evidence of the relative market values of the different program types.

The Bortz survey asked a random sample of CSO program executives how they would have allocated a fixed programming budget among different categories of programs aired on distant signals carried during 2010 to 2013. According to the Bortz survey, as conducted by James M. Trautman, its purpose was "to determine how cable operators value, on a relative basis, the different categories of non-network programming on the distant signals carried."<sup>20</sup> For the 2010-13 Bortz survey, Mr. Trautman sought to "broaden the valuation factors considered by respondents to encompass not just subscriber acquisition and retention...but also any other elements that may affect the relative market value of the non-network distant programming."<sup>21</sup>

Two forms of survey questionnaires were used in the 2010-13 Bortz survey: one form for respondents whose cable systems carried distant signals in addition to or other than WGN and a second form for respondents whose cable systems carried WGN as the only distant signal.<sup>22</sup> The second form differs from the first in that respondents were provided with specific information about and asked to value only the compensable programming on WGN.<sup>23</sup> Each of the questionnaires asked respondents four questions regarding a hypothetical market scenario:

- 1) Qualification: This question aimed to affirm that the respondent was the individual "most responsible for programming carriage decisions."<sup>24</sup>
- 2) Importance: The respondent was instructed to rank programming in order of importance, with one (1) being the most important. The programming categories were:

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<sup>20</sup> See Bortz Survey at p. 9.

<sup>21</sup> See *id.* at p. 40.

<sup>22</sup> See *id.* at p. 14.

<sup>23</sup> See *id.* at p. 14.

<sup>24</sup> See *id.* at pp. 14-15.



- Movies
- Live professional and college team sports
- Syndicated shows, series and specials
- News and other station-produced programs
- PBS and all other programming broadcast by noncommercial station(s)
- Devotional programs
- All programming broadcast by Canadian station(s)<sup>25</sup>

The foregoing program categories are based upon the agreed upon program categories adopted for this proceeding.

- 3) Cost: The respondent was asked to rank how expensive it would have been to acquire the non-network programming in each of the distant signal program categories if the system had been required to purchase that programming in the marketplace.<sup>26</sup>
- 4) Relative Value Allocation: The respondent was asked to value the various types of non-network programming on distant signals by allocating a percentage of a finite dollar amount to each of the program categories on distant signals that the system retransmitted (the constant sum question) based on what s/he would have spent had s/he purchased the various programming categories as defined by the Judges.<sup>27</sup>

The Bortz survey identifies the constant sum question as a “well-established market research methodology to determine relative market values.”<sup>28</sup> The Relative Value Allocation question from the 2013 Bortz survey is reproduced as Figure 1 below. This is the same question used across the 2010-12 questionnaires.

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<sup>25</sup> See *id.* at. pp. 15-16.

<sup>26</sup> See *id.* at. p. 16.

<sup>27</sup> See *id.* at. p. 17.

<sup>28</sup> See *id.* at. p. 1.

Figure 1: Relative Value Allocation (Constant Sum Question)<sup>29</sup>

4a. Now, I would like you to estimate the relative value to your cable system of each category of programming actually broadcast by the stations I mentioned during 2013, excluding any national network programming from ABC, CBS and NBC. Just as a reminder, we are only interested in \_\_\_\_\_ U.S. commercial station(s) \_\_\_\_\_, U.S. non-commercial station(s) \_\_\_\_\_, and Canadian station(s) \_\_\_\_\_.

I'll read each of the seven programming categories we've been discussing again to give you a chance to think about them; please write the categories down as I am reading them. (READ PROGRAM CATEGORIES IN ORDER, STARTING WITH CATEGORY MARKED BY THE NUMBER "1".) Assume your system spent a fixed dollar amount in 2013 to acquire all the non-network programming actually broadcast during 2013 by the stations I listed. What percentage, if any, of the fixed dollar amount would your system have spent for each category of programming? Please write down your estimates, and make sure they add to 100 percent.

What percentage, if any, of the fixed dollar amount would your system have spent on (READ PROGRAM CATEGORY MARKED BY THE NUMBER "1")? And what percentage, if any, would your system have spent on (READ NEXT PROGRAM CATEGORY)? (COMPLETE LIST IN THIS MANNER.)

<u>Start</u>	<u>Percent</u>
( ) <u>Movies</u> broadcast during 2013 by the U.S. commercial stations I listed. ....	_____
( ) <u>Live professional and college team sports</u> broadcast during 2013 by the U.S. commercial stations I listed. ....	_____
( ) <u>Syndicated shows, series and specials</u> distributed to more than one television station and broadcast during 2013 by the U.S. commercial stations I listed. ....	_____
( ) <u>News and public affairs programs</u> produced by or for any of the U.S. commercial stations I listed, for broadcast during 2013 only by that station. ....	_____
( ) <u>PBS and all other programming</u> broadcast during 2013 by U.S. noncommercial station(s) _____	_____
( ) <u>Devotional and religious programming</u> broadcast during 2013 by the U.S. commercial stations I listed. ....	_____
( ) <u>All programming broadcast during 2013 by Canadian station(s)</u> _____	_____
<b>TOTAL</b> .....	_____

**PERCENTAGES MUST ADD TO 100 PERCENT; PROMPT RESPONDENT IF THEY DO NOT.**

The above four questions were asked of the Bortz survey target population of CSOs, not cable subscribers. Attracting and retaining cable subscribers to generate advertising and monthly subscription fee revenue is the ultimate goal of CSOs. Sue Ann R. Hamilton, Founder and Principal

<sup>29</sup> See *id.* at Appendix B, p. B-5.

of Hamilton Media LLC and former EVP of Programming at Charter Communications, Inc., identified four factors that, taken together, influence her cable network and broadcast station decisions with the goal of cable subscriber attraction and retention:

- Actual and/or projected subscriber viewing behavior;
- Legacy carriage;
- Whether carriage of a particular network or station was necessary due to the bundling of stations by content providers; and
- Cost to the cable system to acquire the network or station in terms of overall programming budget.<sup>30</sup>

To evaluate content to carry, CSOs analyze Nielsen data and subscriber commentary via surveys and social media to understand actual and/or projected subscriber viewing behavior.<sup>31</sup> CSOs also consider whether the cable network or broadcast station is carried by competitors when determining whether or not to broadcast certain content.<sup>32</sup> Regarding distant signals in particular, when considering renewal of content, legacy carriage (and viewership and subscriber satisfaction or dissatisfaction associated with legacy carriage) is an important factor in deciding whether to continue carriage.<sup>33</sup> In general, it is difficult for cable systems to drop any channel, especially channels a CSO has carried for a long period of time because there is always a community of subscribers, however small, that is interested in content on that signal.<sup>34</sup> Those subscribers cite CSOs' decisions to drop channels as reason to switch to a competitor.<sup>35</sup> Broadcast content is typically bundled as the bundle model pays for infrastructure, such as pipes, set-top boxes, servers, and repair trucks.<sup>36</sup> Therefore, carriage of certain content may be necessary due to a particular bundling package.

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<sup>30</sup> See Written Direct Testimony of Sue Ann R. Hamilton, December 22, 2016, p. 5 ("Hamilton WDT").

<sup>31</sup> See *id.* at pp. 5-6.

<sup>32</sup> See *id.* at p. 6.

<sup>33</sup> See *id.* at p. 6.

<sup>34</sup> See *id.* at p. 6.

<sup>35</sup> See *id.* at p. 6.

<sup>36</sup> "Why Can't I Have Just the Cable Channels I Want?" *The New York Times*. 16 April 2006. Web. 23 August 2017.

Costs to CSOs to acquire a network or station in terms of the overall programming budget are also considered when selecting content.<sup>37</sup> According to Ms. Hamilton, distant signals make up a small portion of a CSO's overall programming budget.<sup>38</sup> During the 2010-13 time frame, costs associated with carrying distant signals was immaterial when compared to the potential loss of subscribers that could result from dropping a distant station, especially if the distant station in question was offered by competitors.<sup>39</sup>

Due to several flaws in the Bortz survey, its results do not provide reliable evidence that the Judges should use in their determination of the relative market value of the different types of distant signal programming. The economic flaws in the Bortz survey include:<sup>40</sup>

- How a cable operator might allocate their budget is not a determination of relative market value;
- A cable operator's budget allocation at best represents their relative willingness to pay;
- A cable operator's relative willingness to pay fails to consider market demand;
- A cable operator's relative willingness to pay fails to consider market supply;
- A cable operator's relative willingness to pay fails to consider market competition;
- A cable operator's relative willingness to pay is not equal to relative market value;
- The Bortz survey failed to address hypothetical bias; and
- The Bortz survey asked cable operators to allocate their budget on an unrealistic basis.

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<sup>37</sup> See Hamilton WDT at p. 8.

<sup>38</sup> See *id.* at p. 8.

<sup>39</sup> See *id.* at p. 8.

<sup>40</sup> Dr. Joel Steckel was asked to assess the validity of the Bortz survey as the basis for determining the allocation of royalties in this proceeding. Through his assessment of the Bortz survey, Dr. Steckel found additional flaws in the survey. These additional flaws are outlined in his direct testimony. See Direct Testimony of Joel Steckel, Ph.D., December 22, 2016 ("Steckel WDT").

#### D. Summary of Dr. Connolly's Opinions

Dr. Michelle Connolly was asked by the Joint Sports Claimants to “provide [her] opinion as to the appropriate economic analysis for allocating the 2010-13 cable royalties among the Agreed Program Categories.”<sup>41</sup> Based on her review and reliance on previous testimony,<sup>42</sup> she concluded that the Judges should adopt the same approach as they did for the 2004-05 proceeding and should rely on the results of the 2010-13 Bortz surveys.<sup>43</sup> This is based on Dr. Connolly’s opinion that “the 2010-13 Bortz surveys provide a method for determining relative market value that is superior to other methods considered by the [Judges] in prior proceedings, *i.e.*, viewing studies, cable subscriber surveys and a Shapley valuation.”<sup>44</sup>

Dr. Connolly opines that the Bortz surveys “allow for direct estimation of the perceived relative market value of different types of compensable programming carried on distant signals” and that they “are consistent with the relative valuations under a hypothetical market free of the compulsory license.”<sup>45</sup> Dr. Connolly takes this position despite the fact that CSOs do not actually buy content in the form of the different categories of compensable programming about which the survey asks. Instead, the CSOs buy the distant signals that carry those various types of compensable programming intermixed on those distant signals.<sup>46</sup> For example, summaries of WGN programming for 2010, 2011, 2012, and 2013 were provided in Appendix C to the Bortz report.<sup>47</sup> Five different content categories are included in the summaries: “News and Other Station-Produced Programs,” “Syndicated Shows, Series and Specials,” “Live Professional Team Sports,” “Movies,” and “Devotional Programs.” A given WGN distant signal would carry several or all of these categories of programming, not just one category. Dr. Connolly also fails

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<sup>41</sup> See Connolly WDT at p. 3.

<sup>42</sup> See *id.* at pp. 6-7. Dr. Connolly cites others’ testimony and does not appear to add any of her own analysis to come to her conclusion that “[she] agree[s] with the others’ testimony] and believe[s] that the [Judges] should rely primarily upon the 2010-13 Bortz survey results to allocate the 2010-13 cable royalties among the Agreed Program Categories.”

<sup>43</sup> See *id.* at p. 3.

<sup>44</sup> See *id.* at p. 4.

<sup>45</sup> See *id.* at p. 5.

<sup>46</sup> See Federal Register, 57 Fed. Reg. 15286, “1989 Cable Royalty Distribution Proceeding,” April 27, 1992, p. 4.

<sup>47</sup> See Bortz Survey at Appendix C, pp. C-5, C-10, C-15, and C-20.

to consider other flaws inherent in the use of the Bortz survey, which I discuss in more detail below.

Furthermore, Dr. Connolly opines that the regression analyses performed by Dr. Israel for the purposes of these proceedings, like those performed by Dr. Rosston and Dr. Waldfogel in previous proceedings, corroborate the Bortz survey results.<sup>48</sup> Dr. Connolly appears to recognize that “[o]ne of the primary constraints with such empirical studies is that they are by definition relying on observed outcomes in the current market which is subject to regulatory constraints, rather than a hypothetical market free of such regulation.”<sup>49</sup> In other words, data from a regulated market and estimated relationships from that data will be different than what would be observed from an unregulated market. Nonetheless, she concludes, under the assumption that these “constraints” do not unduly impact one programming type over another, that “such regression studies are relevant to corroborating Bortz survey results to the extent that they find similar rank orderings of estimated relative valuations and to the extent that the regression study estimates appear to be of generally similar magnitudes as those estimated using the 2010-13 Bortz surveys.”<sup>50</sup> Dr. Connolly does not provide any analyses to support this assumption. Moreover, Dr. Connolly also fails to consider other flaws inherent in using a regression analysis on the available data from the regulated market, which I discuss in more detail later in this testimony.

#### **E. Summary of Dr. Israel’s Opinions**

Dr. Israel was asked to “determine whether the results of the Bortz Survey are consistent with actual marketplace behavior and thus provide a reliable estimate of the relative marketplace value of various categories of content.”<sup>51</sup> Dr. Israel performed two analyses in connection with his task, which were “(1) a regression analysis that relies upon actual CSO 2010-12<sup>52</sup> compulsory licensing royalty payments [the ‘price’ to license the retransmitted distant signals] to estimate the relative values of the different distant signal programming categories and (2) an

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<sup>48</sup> See Connolly WDT at p. 7.

<sup>49</sup> See *id.* at p. 8.

<sup>50</sup> See *id.* at p. 11.

<sup>51</sup> See Israel WDT at p. 2.

<sup>52</sup> Dr. Israel provides no explanation for not preparing a regression analysis for the 2013 royalty year.

analysis of the 2010-13 payments that various cable networks made to carry sports and other programming.”<sup>53</sup> I was asked to review the economic framework of Dr. Israel’s regression analysis, from which he concluded: “that the Bortz Survey is consistent with observed marketplace behavior and provides a reliable estimate of relative marketplace value of the different types of non-network programming on distant signals.”<sup>54</sup> Specifically, I was asked to determine whether using data from a regulated market and estimating statistical relationships from that data can be used to determine what those estimated relationships would be in an unregulated market.

According to Dr. Israel, his regression permits him to answer the following question: “How much do CSO royalty payments increase with each additional minute of each category of programming content, holding other relevant factors that determine royalty payments fixed?”<sup>55</sup> Dr. Israel’s regression analysis follows the same methodology, with a few modifications, as a regression analysis performed by Dr. Joel Waldfogel in a prior cable royalty distribution proceeding.<sup>56</sup> The modifications made by Dr. Israel include accounting for portions of cable system subscribers receiving a given distant signal (as opposed to all subscribers), including non-compensable network programming as a control variable, eliminating “Mexican” programming as a separate category, using a larger sample size, and eliminating low-power signals as a separate category.<sup>57</sup> Dr. Israel’s regression model included the following control variables:

- Number of CSO subscribers from the previous accounting period;
- Number of activated channels for the CSO in the previous accounting period;
- Count of broadcast channels for the CSO;
- Indicator for whether a CSO pays the special 3.75 percent rate fee;

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<sup>53</sup> See *id.* at pp. 2-3.

<sup>54</sup> See *id.* at p. 3. It is my understanding that Dr. Erdem has also examined Dr. Israel’s work and have determined that there are significant flaws not only with the methodology, but also with the implementation and execution of these analyses. [Written Testimony of Erkan Erdem, Ph.D., March 9, 2017, p. 14 (“Erdem WDT”)].

<sup>55</sup> See Israel WDT at p. 16. Dr. Israel appears to equate his findings to what would be observed if the marketplace was unregulated. He does not appear to account for in any way the regulated nature of the market from which he obtains the data.

<sup>56</sup> See *id.* at pp. 11-12.

<sup>57</sup> See *id.* at pp. 14-15.

- Indicator for whether or not the CSO pays the minimum statutory payment;
- Average household income for the Designated Market Area (DMA) of the CSO; and
- Indicators for the accounting period of each observation.<sup>58</sup>

Dr. Israel claims the regression coefficients on a given programming category represents the average value across all cable systems of an additional minute of that category.<sup>59</sup> For each program category, Dr. Israel multiplied the coefficient by the “System and Prorates DSE Weighted Compensable Minutes” to calculate the value of those minutes. He then determined each program categories’ share of the total value of those minutes, which he opines is the program categories’ implied share of the royalty fund.<sup>60</sup> Dr. Israel’s results are reproduced in the figure below.

**Figure 2 – Reproduction of Dr. Israel Table V-2: Royalty Share Allocation<sup>61</sup>**

<b>Table V-2: Royalty Share Allocation</b>				
<b>Claimant Group</b>	<b>Value of an Additional Minute<sup>1</sup></b>	<b>System and Prorated DSE Weighted Compensable Minutes</b>	<b>Value of Minutes</b>	<b>Implied Share of Royalties</b>
<b>[A]</b>	<b>[B]</b>	<b>[C]</b>	<b>[D] = [B] * [C]</b>	<b>[E] = [D] / (89,701,903)</b>
Sports	4.836**	6,962,722	33,674,484	37.54%
Program Suppliers	0.469***	51,261,616	24,058,506	26.82%
Commercial TV	1.01***	19,677,607	19,873,956	22.16%
Public Broadcasting	0.66**	18,322,702	12,094,957	13.48%
Devotional	-0.701***	4,384,240	0	0.00%
Canadian	-0.973***	4,839,825	0	0.00%
<b>Total</b>		<b>105,448,713</b>	<b>89,701,903</b>	<b>100.00%</b>

Source: TMS/Gracenote; Cable Data Corporation; Kantar Media/SRDS

Notes: \*, \*\*, and \*\*\* indicate results are significant at the 90, 95, and 99 percent confidence levels, respectively.

<sup>1</sup> Minutes prorated.

<sup>58</sup> See *id.* at p. 16.

<sup>59</sup> See *id.* at p. 19.

<sup>60</sup> See *id.* at p. 20.

<sup>61</sup> See *id.* at p. 20. Dr. Israel’s implied “price” for a minute of a claimant group’s programming is represented by the “Value of an Additional Minute” with negative prices estimated for Devotional and Canadian Claimant Group programming.



From this regression analysis and the calculations shown in Figure 2, Dr. Israel concluded that, for the JSC, Program Suppliers, Commercial TV, and Public TV program categories, “the 2010-12 regression results are in accord with the results of the 2010-13 Bortz Survey on the rank order of the relative market value of these programming categories to cable operators.”<sup>62</sup> However, Dr. Israel ignores the fact that the data he used in regression analyses comes from the transactions in a regulated market, not from arms-length transactions in a free market.<sup>63</sup> This undermines the reliability of his analyses given that he concludes that these estimated relationships are what one would observe in an unregulated market in which market participants undertake arms-length transactions in the licensing of programming content. Moreover, Dr. Israel fails to consider other flaws inherent in using a regression analysis on the available data from the regulated market, which I discuss in more detail below.

#### **IV. THE BORTZ SURVEY FAILED TO DETERMINE THE RELATIVE MARKET VALUE OF THE DISTANT SIGNAL COMPENSABLE PROGRAMMING**

##### **A. Cable Operators’ Determination of How They Would Allocate Their Budget is Not a Determination of the Relative Market Value**

##### **1. The Bortz measure of willingness to pay does not account for supply side factors, demand side factors, or market structure**

As discussed above, the Bortz survey, as conducted by Mr. Trautman, was designed to “ask a random sample of cable operators how they would allocate a fixed budget among the different ‘non-network’ programming categories on the distant signals they actually carried in the relevant year.”<sup>64</sup> However, this survey framework and the survey results do not represent the relative market value of the different categories of programming as would be determined from unregulated market transactions. This is because Mr. Trautman, using the Bortz methodology, focuses his approach on “a random sample of cable operators”<sup>65</sup> (*i.e.*, the “buyers” in the

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<sup>62</sup> See *id.* at p. 21.

<sup>63</sup> See Erdem WDT at pp. 3 and 14.

<sup>64</sup> See Bortz Survey at p. 1.

<sup>65</sup> See *id.* at p. 1.

licensing transaction without taking into account the other side of the transaction, that side being the “sellers” side of the transaction). At best, the survey results can represent an estimate of the cable operators’ relative willingness to pay for the different program categories they were asked to consider.<sup>66</sup>

However, estimates of the relative willingness to pay, which are equated to relative market value in the analyses put forth that rely on the Bortz survey, do not include any accounting of the supply side of the transactions.<sup>67</sup> This was acknowledged by the Copyright Arbitration Royalty Panel in the 1990-1992 Cable Royalty Proceeding.<sup>68</sup>

Mr. Trautman and Bortz acknowledged the critiques made regarding lack of consideration of the supply side but concluded “[w]e believe, however, that the survey does reflect the respondents’ understanding of the marketplace prices of the different kinds of programming – which is a reflection of the ‘supply side.’”<sup>69</sup> They opine that respondents are familiar with the rates charged for programming and that failing to account for the supply side would negatively affect the JSC more than any other claimant group because they “negotiate the highest possible prices for their programming in the open market.”<sup>70</sup> However, Mr. Trautman and Bortz Media failed to provide any evidence to support these opinions.

Mr. Trautman and Bortz Media failed to recognize that the respondents to their survey (CSOs) do not purchase the individual programming categories as identified in the survey, and instead purchase entire broadcast signals that include multiple categories of programming.<sup>71</sup> This means the respondents to the Bortz survey are **unfamiliar** with the prices charged in the marketplace for the programming categories when they are carried on these retransmitted distant

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<sup>66</sup> I discuss below why, even if the Bortz methodology can be thought of as estimating CSOs’ relative willingness to pay, it does not accurately estimate that willingness to pay because it asks CSOs to answer questions about programming that they do not face in the marketplace.

<sup>67</sup> See, e.g., Allenby, Greg M., Jeff Brazell, John R. Howell, and Peter E. Rossi (2013): Valuation of Patented Product Features, p. 24. See also Rebuttal Testimony of George S. Ford, 2004-2005 Copyright Royalty Distribution Proceeding, December 11, 2009, Corrected January 15, 2010, pp. 8 and 10 (“Ford Rebuttal WDT”).

<sup>68</sup> See Copyright Arbitration Royalty Panel Report, Cable Royalties for the Years 1990-1992, p. 65.

<sup>69</sup> See Bortz Survey at Appendix A, p. A-14.

<sup>70</sup> See *id.* at Appendix A, p. A-15.

<sup>71</sup> See Hamilton WDT at pp. 10-12.

signals and when they are reorganized and presented to them in the manner adopted for this proceeding.<sup>72</sup> Yet, Mr. Trautman and the Bortz survey assume that the respondents can somehow maneuver their knowledge of acquiring entire signals, which include multiple program categories, to place a value on each program category included in those signals. This assumption, and therefore the survey, ignores the supply side factors, demand side factors, and market structure issues that would be unique to the marketplace for these categories of programming.

For example, the Bortz survey did not attempt to account for what market location survey respondents were allocating a budget for and differences in supply among market locations. There are likely markets that have access to a small number of distant signals to retransmit, and therefore, limited access to the individual program categories they choose to retransmit. There are other markets that have access to a large number of distant signals to retransmit, and therefore, greater access to the individual program categories they choose to retransmit. These differences in supply would affect the cost of acquiring programs in these individual program categories. The relative willingness to pay figures determined by the Bortz survey failed to consider these differences in cost and the effects these costs would have on the respondents' relative willingness to pay.

The failure of the Bortz survey to account for the survey respondents' market location also ignores the different effects the local market can have on demand, and therefore the price that respondents would be willing to pay for individual types of content. Testimony in a previous Cable Royalty Fund distribution dispute suggests that larger markets tend to have more local media supply than smaller markets and therefore smaller markets make use of more distant signals.<sup>73</sup> The availability of local media supply would affect the number of complimentary programs and substitutable programs available to the respondents, and therefore the value the respondents would be willing to pay for the individual programming types.

Moreover, there is no mention in the context of the Bortz survey about what the CSO's market position is and whether it should be considered, regardless of whether the CSO operates in a marketplace with numerous competitors or is the sole market participant. In determining

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<sup>72</sup> See *id.* at pp. 10-12.

<sup>73</sup> See Statement of Joel Waldfogel, June 1, 2009, In the Matter of Distribution of the 2004 and 2005 Cable Royalty Funds, pp. 4-5.

programming market value, it is important to consider what is available in the market from other CSOs (*i.e.*, market competition).

A CSO could potentially have numerous competitors interested in retransmitting a given distant signal.<sup>74</sup> The success a CSO would have in winning the rights to retransmit that signal, under the assumption that it is operating in an unregulated market, would be a function not only of how much it was willing to pay, but also how much other CSOs would be willing to pay. The Bortz survey does not take any of these factors into account in the estimation of relative market value. In fact, in the regression analyses conducted by Dr. Israel, he deems other factors that read on market structure important enough to include them as explanatory variables.<sup>75</sup> By only attempting to determine willingness to pay, the Bortz survey ignores marketplace competition, which has effects on price and quantity and therefore the market value<sup>76</sup> that is not accounted for in the Bortz survey or subsequent analyses.

## **2. Relative willingness to pay does not equal relative market value**

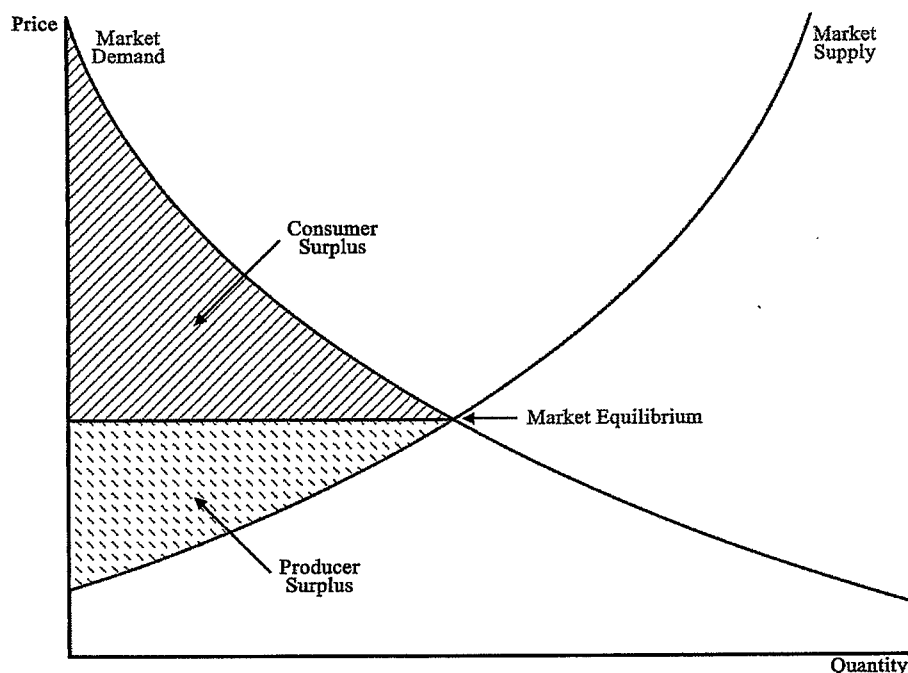
A consumer's willingness to pay is represented by the amount a buyer is willing to pay for a good or service. However, this willingness to pay does not necessarily equal what a consumer actually does pay for the good or service. The following chart illustrates the difference between consumers' willingness to pay for a product and the market or transaction price of the product.

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<sup>74</sup> The Bortz survey did not attempt to account for the programming decisions of CSO competitors. Firms have profit incentives to differentiate their offerings from competitors'. Having a unique offering allows firms to extract higher profits than they may otherwise be able to. If all firms, in this case CSOs, offer the same product (programming), the competition for subscribers necessarily becomes a price competition to determine who can offer the product (programming) for the lowest price.

<sup>75</sup> Dr. Israel includes explanatory variables in his regression such as the number of CSO subscribers from the previous accounting period, the number of activated channels for the CSO in the previous accounting period, the count of broadcast channels for the CSO, and the average household income for the Designated Market Area (DMA) of the CSO, among other variables. (See Israel WDT at p. 16). Additional other factors include subscriber viewing behavior, legacy carriage, whether or not the carriage of a particular network or station is necessary due to the bundling of stations by content providers, and the cost to acquire the content in terms of the overall programming budget. (See Hamilton WDT at p. 5).

<sup>76</sup> See Allenby, Greg M., Jeff Brazell, John R. Howell, and Peter E. Rossi (2013): Valuation of Patented Product Features, p. 2.



The consumer surplus represents the difference between what consumers would be willing to pay for the product (as represented by the market demand curve) and the market equilibrium (or transaction) price. Most consumers that are willing to pay for the product at the market price would be willing to buy it at a price higher than the market price. As a result, for most consumers that are willing to buy the product, the price at which they are willing to buy the product exceeds the market equilibrium price. This is why consumers' willingness to pay for a product is typically higher than the market price.

The Bortz survey, as reported by Mr. Trautman, attempts to measure the willingness to pay in terms of the percentage of a CSO's budget that the CSO's program manager would use for a particular type of programming.<sup>77</sup> However, willingness to pay is not the same thing as a market price, or market value, as the example above illustrates.<sup>78</sup>

<sup>77</sup> See Bortz Survey at p. 1.

<sup>78</sup> Since the relative market value is the ratio of market price of one good to the market price of another good, in the context of the above example, this would mean that the ratio of the willingness to pay for two types of market programming would have to equal the ratio of the market value of those same two types of programming. Since the willingness to pay does not equal market value for the vast majority of consumers, it is only under very unlikely circumstances that relative willingness to pay would equal relative market value.

In fact, the relative willingness to pay does not equal relative market value except under restrictive assumptions that the demand curves for each type of programming are linear and the demand elasticities at the relevant price-quantity combinations for all of these programming categories are equal.<sup>79</sup> These assumptions typically would not hold, and there has been no evidence to suggest that they would hold in this case.<sup>80</sup> As a result, it is inappropriate to equate the relative willingness to pay measures derived from the Bortz survey to relative market values.

### **3. The Bortz survey and subsequent analyses did not address hypothetical bias**

A consumer's willingness to pay is represented by the amount a buyer is willing to pay for a good or service. However, research has shown that typically a consumer's reported willingness to pay is an overestimate of what a consumer actually would pay for a particular good or service.<sup>81</sup> In other words, what respondents say they would do in a hypothetical situation does not necessarily correspond to what they actually do. The difference between the hypothetical willingness to purchase (or pay) and the real willingness to purchase (or pay) is known as "hypothetical bias."<sup>82</sup>

Measuring a consumer's real willingness to purchase a product or include a feature as part of their purchase is typically done by examining whether the consumer purchases the product or feature. This is in contrast to a consumer's hypothetical willingness to purchase a product or feature which does not require any type of economic commitment on the part of the consumer.

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<sup>79</sup> See Ford Rebuttal WDT at Appendix A.

<sup>80</sup> For example, for these conditions to hold the selected quantities of each program category would have to fall on the portion of their respective demand curves where the price elasticity of demand for programming from each of these categories would be equal. That is extremely unlikely given that it is also required that the demand curves for programs from each of these programming categories are linear and the price elasticity of demand on a linear demand curve varies at each price-quantity combination.

<sup>81</sup> See List, J.A. and Gallet, C.A. (2001). What Experimental Protocol Influence Disparities Between Actual and Hypothetical Stated Values? *Environmental and Resource Economics*, vol. 20(3) (November), pp. 241–54 at 241. See also, Ford Rebuttal WDT at p. 6.

<sup>82</sup> See Allenby, Greg M., Jeff Brazell, John R. Howell, and Peter E. Rossi (2013): Valuation of Patented Product Features, p. 24. See also Miller, Klaus M., Reto Hofstetter, Harley Krohmer, and Z. John Zhang. "How Should Consumers' Willingness to Pay Be Measured? An Empirical Comparison of State-of-the-Art Approaches," *Journal of Marketing Research*, Vol. XLVIII (February 2011), p. 173.

The Bortz survey, which is determined by Dr. Connolly as the best approach for determining relative market value, does not attempt to determine what CSOs actually do in the context of choosing distant signals to retransmit. Instead, the survey attempts to gauge what CSOs may hypothetically do in the context of estimating “the relative value to [their] cable system[s] of each category of programming actually broadcast.”<sup>83</sup> In other words, the Bortz survey endorsed by Dr. Connolly attempts to measure CSO’s hypothetical willingness to pay for programming content and then assumes that CSO’s hypothetical willingness to pay for that content translates perfectly into their real willingness to purchase that content. The Bortz survey does not address this issue, and Dr. Connolly failed to address hypothetical bias either. This is inappropriate. In fact, research studies show that, when controlling for question formats, the hypothetical bias in consumer-intent type measures, like willingness-to-pay, can be substantial with the hypothetical willingness to pay exceeding the real willingness to pay.<sup>84</sup> Even in the absence of any other flaws, by not accounting for this hypothetical bias, the Bortz survey likely measured willingness to pay, in the form of budget percentages, inaccurately.

**B. The Decision Framework Set Up by the Survey Failed to Mirror the Decision Framework That is Used by Cable Operators**

Cable operators use and purchase individual channels that include a variety of program categories; they do not purchase program categories or allocate their budget to individual program categories. However, as discussed, how a cable operator would allocate their budget to individual program categories is exactly what the Bortz survey asks respondents to do. The Bortz survey is, therefore, asking respondents to consider something they do not normally do in the regular course of business. In economic terms, the Bortz survey assumes that the respondents have experience in a marketplace with products defined as types of programming that fall into the claimant group categories when they do not. As a result, cable operator survey respondents

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<sup>83</sup> See Bortz Survey at p. B-5.

<sup>84</sup> List, J.A. and Gallet, C.A. (2001). What Experimental Protocol Influence Disparities Between Actual and Hypothetical Stated Values? *Environmental and Resource Economics*, vol. 20(3) (November), pp. 241–54 at 241. See also, for example, Wertenbroch, Klaus and Bernd Skiera. “Measuring Consumers’ Willingness to Pay at the Point of Purchase.” *Journal of Marketing Research*, Vol. XXXIX (May 2002) p 238. To account for hypothetical bias, survey researchers can conduct incentive-aligned surveys or make post-survey adjustments to the hypothetical willingness to purchase and/or pay. The Bortz survey failed to account for hypothetical bias at all.

were forced to contemplate how they would disaggregate content on the distant signals and re-aggregate them into the categories proposed by the Bortz survey.

Making their task even more difficult was the fact that the Bortz survey, as reported by Mr. Trautman, did not define the types of programming that were included in each category description, or provide representative examples of the programs. Instead, the survey simply introduced the categories, for example, Movies; Live Professional and College Team Sports; Syndicated Shows, Series and Specials; News and Public Affairs Programs; PBS and All Other Programming Broadcast by Noncommercial Station(s); Devotional Programs; and All Programming Broadcast by Canadian Station(s),<sup>85</sup> without any category descriptions or representative program examples provided. Ms. Hamilton in her direct testimony indicated that these categories are not like any programming categories used by the industry, as explained later in this testimony.<sup>86</sup> This survey flaw means that different CSOs responding to the Bortz survey likely had different definitions of types of programming that they applied to the survey exercise they were asked to complete.

As discussed above, there are several different factors considered by cable operators when choosing content streams to carry and the pricing of those content streams.<sup>87</sup> These factors were not accounted for in the Bortz survey. Thus, cable operators' decisions regarding content to provide are more complex than and do not follow the constant sum scaling approach implemented in the Bortz survey.

Further, the Bortz survey does not measure cable subscriber preferences. Subscriber preferences, shown through viewing behavior, provide a reasonable measure of the relative

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<sup>85</sup> See Bortz Survey at Appendix B, p. B-5.

<sup>86</sup> See Hamilton WDT at p. 10.

<sup>87</sup> See *id.* at p. 5. The judges in the 2004-2005 Cable Royalty Distribution proceeding noted that "The rationale for the cable operator's decision concerning which channels to group in any tier offering and at what price, may depend not only on the impact on direct subscriber revenues, but also on such factors as advertising revenues associated with cable network channels, the relative license fee costs of various cable network channels, physical capacity constraints on the number of channels that can be transmitted over articular cable system and even the direct ownership interests of the cable system in programming content on a given cable network." See Federal Register, Volume 75, No. 180, September 17, 2010, p. 57066.



market value of the retransmitted programs.<sup>88</sup> According to a producer and distributor of syndicated programs, “program revenues are determined by the appeal of a program based on the number of viewers watching.”<sup>89</sup> Also, as mentioned above, actual and/or projected subscriber viewing behavior is a key factor considered by CSOs when making programming decisions.<sup>90</sup> As a result, the relative market value of a program depends upon its level of viewership. Thus, cable subscriber preferences should be considered when attempting to determine the relative market value of the retransmitted programming at issue in this proceeding.

**C. The Program Categories Fail to Align with the General Cable Industry Classification of Program Genres**

The Bortz survey adopted the program categories that have been agreed upon for this proceeding.<sup>91</sup> It is my understanding that these program categories are not consistent with the cable industry’s general understanding of what programming falls within a given category or genre.<sup>92</sup> Ms. Hamilton explained in her direct testimony that the industry understanding of program genres is broader than how they have been defined for the purposes of this proceeding.<sup>93</sup> She explained that it would likely be difficult for survey respondents to contemplate the “live professional and college team sports” category as not containing sports such as NASCAR and Formula One racing, PGA and LPGA golf, professional tennis, individual and team performance “ninja” and “warrior” races, cycling, running, and swimming competitions, and the Olympics since they are all commonly understood in the industry to fall under the “sports” umbrella.<sup>94</sup>

Further, cable operator program managers do not often differentiate between network and non-network sports as the survey asks them to do, and may not recognize that pre- and post-game shows, interviews, and highlights fall within the Program Suppliers’ category (rather than JSC), or that station-produced programs such as high school games and local newscasts covering

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<sup>88</sup> See Gray WDT at p. 7.

<sup>89</sup> See Written Direct Statement Regarding Allocation Methodologies of Program Suppliers, Volume II, Prior Designated Testimony, December 22, 2016, Tab A, Testimony of Alex Paen (filed June 1, 2009), p. 11. See also, Direct Testimony of Jan Pasquale, December 22, 2016, pp. 3 and 5-6 (“Pasquale WDT”).

<sup>90</sup> See Hamilton WDT at p. 5. See also, Pasquale WDT, pp. 3 and 5-6.

<sup>91</sup> See Bortz Survey at p. 15.

<sup>92</sup> See Hamilton WDT at p. 10. See also Gray WDT, p. 4.

<sup>93</sup> See Hamilton WDT at p. 10.

<sup>94</sup> See *id.* at p. 10-11. See also Gray WDT, pp. 4-5.

professional and college teams fall within the Commercial Television program category (rather than JSC).<sup>95</sup> In economic terms, it would be difficult for a survey respondent to consider what they would budget and spend for a category or genre that is defined differently than it is in their normal course of business. As a result, it is not appropriate to assume that answers given in this hypothetical framework would well represent arms-length transactions in an unregulated marketplace.

Moreover, Ms. Hamilton also indicated that CSOs were not asked to, nor could they have differentiated what types of sports should be included in the “Live Professional and College Team Sports” category. As a result, sample estimates derived from the Bortz survey data would be hopelessly confounded by inappropriate exclusion or inclusion of certain types of sports. This is a serious flaw with the Bortz survey to the extent respondents did not fully understand the composition of the programming categories they were asked about (which is likely given the lack of explanation provided to them).<sup>96</sup>

Mr. Trautman and Bortz acknowledged this criticism but concluded the category descriptions given provided respondents with a sufficient level of understanding.<sup>97</sup> They even acknowledged “the potential for certain ‘fringe’ programming to be interpreted as belonging in one category when for the purposes of these proceedings it may belong in another,” but went on to state that “categories must be defined as concisely as possible” and that the use of examples is inappropriate.<sup>98</sup> Mr. Trautman and Bortz provided no evidence that the category descriptions given provided respondents with a sufficient level of understanding.

The results of the Horowitz survey clearly demonstrate that the descriptions provided to the respondents in the Bortz survey failed to provide a sufficient level of understanding. The Horowitz survey provided respondents with examples and a detailed description of what was included in each of the programming categories. In 2013, the Bortz survey allocated 38% of the

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<sup>95</sup> See Hamilton WDT at p. 11.

<sup>96</sup> See Gray WDT at p. 10.

<sup>97</sup> See Bortz Survey at Appendix A, p. A-8.

<sup>98</sup> See *id.* at Appendix A, p. A-8.

budget to live professional and college team sports.<sup>99</sup> When provided additional detail and the examples, respondents in the Horowitz survey only allocated 26% of 2013 budget to live professional and college team sports.<sup>100</sup> This difference demonstrates the descriptions and examples included in the survey had a direct and significant effect on the results of the survey.

## **V. THE RESULTS OF DR. ISRAEL'S REGRESSION ANALYSIS CANNOT BE USED TO CORROBORATE THE RESULTS OF THE BORTZ SURVEY**

### **A. Dr. Israel's Regression is Improperly Based on the Compulsory Royalties That Have Been Paid by the Cable Providers**

Dr. Israel's regression analysis makes use of the compulsory royalties paid by CSOs under Section 111 of the Copyright Act. As explained above, these compulsory royalties are based on a specific regulatory formula established by Congress and not on free market transactions, *i.e.*, arms-length negotiations between willing buyers and willing sellers. Copyright owners are compelled by regulations to accept the formulaic royalty payments as adequate compensation for the rights to retransmit the programming content.<sup>101</sup> This is opposite to what would be expected in an unregulated transaction between a willing seller and buyer where there would be no compulsion to accept a predetermined royalty for the programming content.

In fact, Dr. Connolly appears to recognize that "[o]ne of the primary constraints with such empirical studies is that they are by definition relying on observed outcomes in the current market which is subject to regulatory constraints, rather than a hypothetical market free of such regulation."<sup>102</sup> Thus, the compulsory royalties, or "prices," set up for regulated market transactions are arbitrarily derived from the compulsory licensing formula. It is improper to equate compulsory royalties in a regulated market to free market values because the prices

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<sup>99</sup> See *id* at p. 3.

<sup>100</sup> See Direct Testimony of Howard Horowitz, December 22, 2016, p. 15.

<sup>101</sup> As described above, the copyright royalty is determined by the type of distant signal carried, the number of distant signals carried, and the gross receipts of the CSO. It is not determined by the quality of the programming, the demand for the programming, subscriber viewing behavior, legacy carriage, whether or not the carriage of a particular network or station is necessary due to the bundling of stations by content providers, and the cost to acquire the content in terms of the overall programming budget among other things, which would be expected considerations in free market transactions.

<sup>102</sup> See Connolly WDT at p. 8.

derived from regulated markets are not equivalent to those that would exist in a free market.<sup>103</sup> As a result, a regression analysis using the data from this regulated market should not be expected to appropriately proxy for statistical relationships that would result from a regression using unregulated market data.

In fact, it is my understanding that all CSOs are required to pay some amount into the cable royalty fund even if they do not retransmit any distant signals, or if they broadcast fewer distant signals than this minimum royalty payment would permit.<sup>104</sup> This would not be economically rational unless there is some unknown constraint that would not allow these CSOs to retransmit for what they were obligated to pay. Moreover, to the extent that there are CSOs that retransmit only the amount of distant signals covered by their minimum required payment, that could be an indication of CSOs broadcasting distant signals because they were already compelled to pay a minimum amount into the copyright fund and not because the payment reflected any type of market value of the content being retransmitted. As a result, these situations would further cause deviation from observed outcomes in the regulated market vis-à-vis the hypothetical unregulated market where there is no compulsion for a minimum copyright royalty.

**B. Dr. Israel's Regression Methodology Incorrectly Models the Copyright Royalty Payment Process**

The programming mix of a given distant signal is not part of the calculus in determining the copyright royalty payment.<sup>105</sup> This leads to situations where the royalty paid by a CSO is approximately the same for two distant signals because the type of distant signal carried, the number of distant signals carried, and the gross receipts of both CSOs are roughly the same, even though the programming content of the distant signals is different.<sup>106</sup> However, transactions like

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<sup>103</sup> See Erdem WDT at pp. 3 and 14. See also Ford Rebuttal WDT, pp. 13-14.

<sup>104</sup> See Federal Register, 61 FR 55653, "Distribution of 1990, 1991 and 1993 Cable Royalties," October 22, 1996, p. 55654. See also Kessler WDT, p. 18. It is my understanding that Dr. Israel's regression analysis does not account for CSOs that choose not to retransmit any distant signals or choose to transmit less than what the minimum royalty amount that they are obligated to pay would entitle them to retransmit.

<sup>105</sup> See Erdem WDT at p. 4.

<sup>106</sup> See Ford Rebuttal WDT at p. 15.

the aforementioned ones undermine the legitimacy of the assumption made by Dr. Israel that regulated transactions convey relative market value for categories of programming content.

## VI. CONCLUSIONS

Based on my review of the Bortz survey, the regression analyses conducted by Dr. Israel and Dr. Connolly's reliance on both the survey and the regression analyses, I find that both the survey and the regression analyses are flawed from an economic standpoint,<sup>107</sup> and Dr. Connolly's reliance on the survey and the regression analyses is similarly flawed for at least, the following reasons:

- The Bortz survey's determination of how a CSO would allocate its budget failed to account for the relative market value of the different types of retransmitted distant signal programming that is at issue, for at least the following reasons:
  - The Bortz survey failed to recognize that CSOs do not purchase the individual programming categories adopted for this proceeding. Respondents to the survey are unaware of the prices charged in the marketplace for the programming categories carried in these retransmitted distant signals when such programming is reorganized and presented to them in the manner adopted for this proceeding. Therefore, the survey ignores supply side factors, demand side factors, and market structure issues that would be unique to the marketplace for the adopted categories of programming. Ignoring these factors undermines the reliability of this survey and Dr. Connolly's reliance on this survey.
  - It is inappropriate to equate the relative willingness to pay measures derived from the Bortz survey to relative market values. The Bortz survey attempted to measure willingness to pay. However, willingness to pay is not the same as a market price or market value. Willingness to pay only equals market value under a restrictive and unlikely set of assumptions, and there is no evidence to suggest that these assumptions would hold in this case. Therefore, Dr. Connolly's conclusion that the Bortz survey measures relative market value is flawed.<sup>108</sup>

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<sup>107</sup> I understand that Drs. Erdem and Steckel also find flaws in the Bortz survey and Dr. Israel's regression. (See Erdem WDT and Steckel WDT).

<sup>108</sup> See Connolly WDT at pp. 5-7.

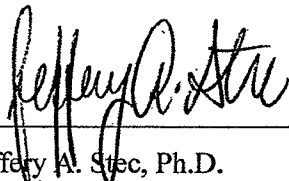
- The Bortz survey failed to account properly for the concepts of “real willingness to pay” versus “hypothetical willingness to pay.” By not accounting properly for this hypothetical bias, the Bortz survey likely measured willingness to pay, in the form of budget percentages, inaccurately. Dr. Connolly also failed to address hypothetical bias. This, once again, makes Dr. Connolly’s conclusion that the Bortz survey measures relative market value flawed.
- The Bortz survey failed to mirror consumers’ buying experiences. The Bortz survey asked respondents to consider products defined as types of programming that fall into the programming categories adopted for this proceeding, which is not something they do in the regular course of business. The survey forced respondents to contemplate how they would disaggregate content on distant signals and re-aggregate them into the categories proposed by the Bortz survey.
  - The survey also failed to define the types of programming that were included in each category. Therefore, each CSO responding to the Bortz survey likely had different definitions of the types of programming that they applied to their survey answers.
  - The constant sum scaling approach implemented in the Bortz survey failed to account for the complex decision-making process required by cable operators when purchasing program content.
  - The Bortz survey failed to measure cable subscriber preferences. Subscriber preferences, shown through viewing behavior, provide a reasonable measure of the relative market value of the retransmitted programs and should be considered when attempting to determine the relative market value of the retransmitted programming at issue in this proceeding.
- The program categories used in the survey fail to align with the general cable industry classification of program genres. This makes it difficult for a survey respondent to consider what they would budget and spend for a category or genre that is defined differently than it is in their normal course of business. Therefore, it is inappropriate to assume the answers given in the survey well represent arms-length transactions in an unregulated marketplace.

- The results of Dr. Israel's regression analysis cannot be used to corroborate the results of the Bortz survey, for at least the following reasons:
  - Dr. Israel's regression analysis improperly relies on the compulsory royalties paid by the CSOs. These royalties are not what would be expected in an unregulated transaction between a willing seller and buyer for programming content.
  - Dr. Israel improperly relied on transactions that are agnostic to the programming content to determine the relative market value for the retransmitted programming at issue in this proceeding. The type of programming that is part of a distant signal does not affect the amount of the copyright royalty payment included in the transaction. Dr. Israel's reliance on these transactions undermines the legitimacy of his regression analysis.

Because of the serious flaws with the Bortz survey from an economic perspective, the survey provides no reliable basis for Dr. Connolly to conclude that the "surveys provide a method for determining relative market value that is superior to other methods considered by the [Judges] in prior proceedings."<sup>109</sup> Because of the serious economic flaws with the regression analysis run by Dr. Israel, the regression provides no reliable basis for Dr. Connolly to conclude that the "observable marketplace behavior – as reflected in the studies (including the regression analysis) undertaken by Dr. Mark Israel...corroborates the 2010-13 Bortz survey results."<sup>110</sup>

I declare under penalty of perjury that the foregoing testimony is true and correct, and of my personal knowledge.

Executed on September 15, 2017

  
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Jeffery A. Stec, Ph.D.  
Vice President  
Charles River Associates

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<sup>109</sup> See *id.* at p. 4.

<sup>110</sup> See *id.*

# Exhibit 1



**JEFFERY A. STEC**

Vice President

Ph.D. Economics,  
The Ohio State University

M.A. Economics,  
The Ohio State University

B.A. Economics,  
The University of  
Illinois-Chicago

B.A. Psychology and  
Philosophy,  
Cornell University

As a Vice President of Charles River Associates, Dr. Stec has worked with clients in the areas of antitrust, finance, intellectual property, and survey research, both as a consulting expert and as an expert witness. His engagements typically involve the application of economic, financial, statistical, and survey research theory to the collection and analysis of data to evaluate the economic impact of decisions made by consumers and firms.

In the area of intellectual property, Dr. Stec has conducted economic and econometric analyses to determine the value of intellectual property as well as the amount of economic damages resulting from patent, trademark, trade secret, or copyright infringement. He has evaluated economic issues in the context of Section 337 investigations conducted by the U.S. International Trade Commission. He has evaluated issues of secondary meaning, genericness, and likelihood of confusion in the context of trademarks and trade dress. Dr. Stec has also determined economic damages that resulted from false advertising and counterfeit claims.

In the area of survey research, Dr. Stec has both created and critically evaluated surveys in the context of antitrust and intellectual property engagements. He has developed complex sample designs, designed survey questionnaires, and collected and analyzed survey data, including the derivation of complex variance estimates using simulation methods. He has used survey methods to investigate the product attributes that consumers evaluate when making choices among product alternatives. Dr. Stec has also consulted on best survey practices for the design, collection, and analysis of survey data.

In the area of antitrust, Dr. Stec has used economic and econometric analyses to investigate issues related to market definition, determination of market power or market dominance, and the effect of anticompetitive acts on competition. Some of these investigations include the effects of anticompetitive acts in the context of Sherman, Clayton, and Robinson-Patman Act claims dealing with abuse of market power as well as the use of various horizontal and vertical restraints, like price fixing, price discrimination, refusals to deal, exclusive dealing arrangements, and tying, on individual firms or members of a class.

In the area of finance, Dr. Stec has used financial theory and econometrics to conduct analyses to determine asset values and shareholder loss in the context of securities fraud and late trading claims. These analyses have included the use of various loss causation and event study paradigms as well as trading simulation studies. Dr. Stec has examined claims of financial lending discrimination, which included investigations of the likelihood of discrimination and the potential damages caused by that discrimination. Dr. Stec has also used financial theory to determine damages in commercial contract disputes and product liability litigation.

Engagements Dr. Stec has worked on have dealt with the semiconductor and semiconductor design, computer software and hardware, pharmaceuticals, telecommunications, handheld mobile devices, paper products, casino gaming, consumer appliances, automated pharmacy systems, consumer electronics, heavy haul truck trailers, textile machine, precious stones, fashion apparel and luxury accessories, outdoor lighting, vehicle parts, medical products, hardware, product packaging, toys, plastics, pallet, television ratings, financial securities and loans, alcohol, tobacco, sugar, sweetener, and tradeshow industries, among others.

Prior to joining Charles River Associates, Dr. Stec had been engaged in economic and survey research and consulting. He has analyzed the credit card industry in detail, including co-authoring monthly state and national surveys to gauge consumers' credit card and overall indebtedness. He also helped to design numerous telephone, mail, and internet surveys for various clients. His responsibilities included everything from sample and questionnaire design to data collection methods and statistical analyses of survey data. He has performed econometric studies and written on various economic and survey research topics such as, optimal forecasting methods using time-series data, the effects of unit nonresponse on survey data, efficient methods for conducting telephone surveys, and methods for gauging the degree of consumer indebtedness using original survey data.

Dr. Stec has presented his research at the annual meetings of the American Statistical Association, the American Association of Public Opinion Research, the Midwest Association of Public Opinion Research, the Ohio Association of Economists and Political Scientists, the Midwest Macroeconomics Association, and the Columbus Association of Business Economists. He has also published his work in the American Statistical Association's Proceedings of the Section on Survey Research Methods and Proceedings of the Section on Government Statistics and Section on Social Statistics. Dr. Stec also contributed and served as a member of the advisory board for the *Encyclopedia of Survey Research Methods*. He has also written the chapter on the use of surveys in litigation published in the *Litigation Services Handbook*.

## SELECTED EXPERIENCE

### Intellectual Property

Developed economic models to determine damages due to infringement of patents held by a large paper products company. Included a determination of the damages due to the plaintiff's loss of distribution for its patented products due to the infringement of the defendant. Developed a lost distribution model to quantify the amount of distribution lost and the value of that distribution in terms of lost sales to the plaintiff. Additionally, it included the development of a lost profits, market share based model that quantified the lost profits due to lost customers' sales.

Provided expert testimony in a patent infringement litigation in the plastic product manufacturing industry. Determined the percentage of accused products that infringed a number of patents by developing and conducting a multi-stage probability sample of the relevant plastic packaged products. Responsibilities included sample design, overseeing data collection, and data analysis using advanced statistical methods.

Developed economic models to determine damages suffered by a manufacturer of pharmaceutical products as a result of infringement of a number of patents. Studied the market for the patented product, evaluated the substitutability of potentially competing products, and determined sales and profits lost by the patent holder. Constructed and queried a large product database to determine which products infringed which of the many patents-in-suit. Developed analyses of a reasonable royalty under a hypothetical licensing agreement and the effect of the infringing product on the price in the marketplace. Evaluated an econometric market expansion theory proposed by the counterparty.

Developed economic models to determine damages suffered by a manufacturer of semiconductor devices as a result of a competitor's infringement of numerous patents. Determined the profits the plaintiff lost due to price erosion and a determination of reasonable royalties on infringing sales. Constructed a sophisticated econometric model using a large dataset of sales, prices, and other variables that estimated the price elasticity of demand for the relevant product and geographic markets.

Provided expert testimony in a trademark infringement litigation in the children's toy industry. Determined whether survey data were appropriately collected and analyzed in the evaluation of secondary meaning to a mark. Evaluated the survey methodology used by the counterparty to determine whether secondary meaning had accrued to the mark.

Constructed and queried a large proprietary database of regional oil and gas prices to determine differences in branded and generic prices for the purposes of determining the value of a gasoline trademark. Included filtering of the database to examine price differences for various grades of gasoline, various regions of operation, and various time periods.

Provided expert testimony in a trademark infringement litigation in the wine industry. Determined whether survey data were appropriately collected and analyzed in the context of likelihood of confusion between two marks. Evaluated the survey methodology used by the counterparty to determine whether there was survey evidence of the likelihood of confusion between the marks.

Developed economic models to determine damages suffered by a manufacturer of coronary medical devices as a result of a competitor's infringement of numerous patents. Developed lost profits and reasonable royalty models addressing issues such as market definition, product pricing in the absence of infringement, market size and competitors' market share in the absence of infringement, and determination of incremental costs. Developed sophisticated econometric models to address these issues.

Provided expert testimony in a theft of trade secrets in the investor relations services and technology industry. Determined expected client longevity in the absence of the theft of trade secrets taking into account client-specific characteristics using multivariate statistical models that also accounted for the censored nature of the underlying data. Developed damages models using the expected client longevity and the actual client longevity to determine the impact of the alleged theft of trade secrets.

Developed economic models to determine damages suffered by a consumer goods manufacturer as a result of counterfeit sales being made by various retailers. Determined the profits the plaintiff lost due to price erosion in the relevant product and geographic markets. Developed econometric models to determine the price elasticity of demand for the impacted consumer goods.

Developed economic models to determine damages suffered by inventors of children's consumer products as a result of infringement of a number of patents. Evaluated the product and geographic markets for the patented product; valued the patented technology, including the determination of the impact of the use of the patented technology on the infringer's sales and profits and the costs to design around the infringed technology; and determined the impact various other factors would have on the royalty rate that might be negotiated by both parties.

Developed economic models to determine damages suffered by a manufacturer of gene sequencing and analysis products as a result of infringement of a number of patents. Studied the markets for the patented product, evaluated the substitutability of potentially competing products made by various manufacturers, and valued the patented technology from both parties perspectives. Constructed and queried a large product database to determine which products infringed which patents-in-suit and the revenues associated with those products.

Provided expert testimony in a patent infringement matter related to antitrust counterclaims in the centralized hospital pharmacy automation systems market. Conducted analyses to determine the relevant product and geographic markets. Evaluated whether the counterparty had market power in the relevant markets. Examined alleged anticompetitive acts to determine the economic impact of these acts. Determined economic damages these anticompetitive acts had on the claimant.

Provided expert testimony in a trademark infringement litigation in the low-bed, heavy haul trailer industry. Designed sampling approach and survey instrument used to collect data. Analyzed data collected from the survey in the context of whether secondary meaning could be attached to the trademark at issue.

Provided expert testimony in a trademark infringement litigation in the clothing fashion industry. Evaluated the market definition methodology used by the opposing expert and determined the appropriate definition of the relevant market. Evaluated the survey methodology used by the counterparty to determine whether there was survey evidence of the likelihood of confusion between the marks. Determined whether survey data were appropriately collected and analyzed to determine the likelihood of confusion. Evaluated whether damages occurred to the defendant due to the likelihood of reverse confusion.

Developed economic analyses to determine the appropriate royalty rate for a compulsory license which would give the infringing party the ability to continue to make and sell medical devices after a jury found infringement. Examined the patented technology's benefits to the infringer and the maximum it would be willing to pay for its use. Examined the benefits of the patented technology to the infringed party and the minimum it would be willing to accept for its use.

Provided expert testimony in a trademark infringement litigation in the antibiotic ointment industry. Evaluated the survey methodology used by the counterparty to determine whether there was survey evidence that secondary meaning had been established for the trademark. Determined whether survey data were appropriately collected and analyzed to determine secondary meaning. Evaluated the appropriateness of using the survey data collected for the purposes of determining whether dilution to the trademark had occurred.

Developed economic models to determine damages suffered by a manufacturer of outdoor security lighting products as a result of patent infringement. Defined the markets for the patented product and the relevant substitutes for that product. Established the likelihood that lost sales due to the counterparty's infringement of the patent. Determined the value of the patented technology to both parties in generating product sales.

Provided expert testimony in a patent infringement litigation in the handheld mobile computing devices industry for the purposes of a preliminary injunction. Defined the relevant market for the alleged infringing products. Determined the competitive effect that the accused products would have on the counterparty's sales and product prices. Evaluated the likelihood that the plaintiff would be irreparable harmed by the alleged patent infringement. Evaluated the counterparty's opinions as to the effects on its sales and prices of the alleged infringement.

Conducted survey research in a trademark infringement litigation in the student information systems software industry. Designed the survey questionnaire and sampling approach used to collect data. Analyzed data collected from the survey in the context of whether secondary meaning could be attached to the trademark at issue.

Provided expert testimony in a patent infringement litigation in the hydraulic disc bicycle brake industry. Conducted analyses to determine the relevant market. Evaluated claims of lost profits, price erosion, and reasonable royalties. Developed analyses to determine demand for the patented feature of the products as well as economic damages due to patent infringement.

Provided expert testimony in a patent infringement litigation in the medical products industry. Evaluated the product market for the patented product to determine demand for and the value of the patented technology. Determined the costs to design around the infringed technology and determined the impact various other factors would have on the royalty rate that might be negotiated by both parties.

Provided expert testimony in a copyright infringement litigation in the software industry. Determined the relevant market in which the software was used. Developed analyses to determine the foregone profits due to the illegal use of the copyrighted software as well as the unjust enrichment for that use.

Developed economic and survey research analyses to evaluate damages claims associated with alleged violations of the Lanham Act concerning false advertising in clothes dryer industry. Evaluated whether the alleged false advertising had an adverse impact on the sales and prices of the counterparty's clothes dryers. Evaluated whether the alleged false advertising had a favorable impact on the accused party's clothes dryers.

Provided expert testimony in a patent infringement litigation in the farm machinery industry. Oversaw the sampling and collection of data from the use of the alleged infringing machines as well as non-infringing alternatives. Conducted advanced statistical tests to determine whether various configurations of the farm machinery produced statistically different measures of performance. Evaluated the statistical methodology used by the counterparty's expert.

Provided expert testimony in patent infringement matter in the medical products industry. Studied the markets for the patented product and evaluated the substitutability of potentially competing products made by various manufacturers to determine the relevant market. Developed economic models to value the patented technology from both parties perspectives in order to determine damages suffered by the plaintiff. Evaluated the opposing expert's damages opinions attributed to the counterparty's alleged infringement.

Conducted industry research and developed economic models to determine the value of a portfolio of patents in the gene sequencing industry. Provided information on the possible ways in which the patents could be monetized to provide value to the client.

Provided expert testimony in a patent infringement litigation in the compact digital camera industry. Evaluated the survey methodology used by the counterparty's expert to determine the value of the patented features in the accused products. Determined whether the survey and sampling design were appropriately constructed. Examined whether the survey data were appropriately collected and analyzed to determine the value of the patented features.

Conducted survey research in a copyright infringement litigation in the outdoor wind sculpture industry. Designed the survey questionnaire and sampling approach used to collect data. Analyzed data collected from the survey to evaluate whether the protected work and the accused work were substantially similar from the viewpoint of an ordinary observer.

Provided expert testimony in a patent infringement investigation in the video analytics software industry. Evaluated the counterparty's claims regarding the economic prong of the domestic industry requirement. Determined the amount of the bond associated with the Presidential review period.

Provided expert testimony in a patent infringement investigation in the vehicle windshield wiper blade industry. Analyzed financial and industry information to evaluate whether a domestic industry had been established by the Complainant. Conducted analyses to evaluate the appropriateness of an exclusion order, cease-and-desist order, and the appropriate amount of the bond associated with the Presidential review period. Evaluated the counterparty's claims regarding the economic prong of the domestic industry requirement.

Conducted survey research in a trademark infringement litigation in the retirement home industry. Designed the survey questionnaire and sampling approach used to collect data. Analyzed data collected from the survey in the context of whether there was the likelihood of confusion between the trademarks at issue.

Developed economic analyses to determine whether there was evidence of commercial success for a pharmaceutical product in its relevant market. Examined the financial information for the pharmaceutical product as well as discounted profitability of the product relative to the investments undertaken to bring the product to market. Evaluated the counterparty's claims regarding commercial success.

Conducted survey research in a trademark infringement litigation in the coffee maker industry. Designed sampling approach and survey instrument used to collect data. Analyzed data collected from the survey in the context of whether secondary meaning could be attached to the trademark at issue.

Conducted industry research, evaluated economic models, and developed licensing strategy to assist the valuation and licensing of patented technology and trade secrets in the steel-making industry. Provided information on the possible ways in which the technology could be licensed and provided strategic advice on how to set up the licensing agreement.

Developed economic analyses to determine whether there was evidence of commercial success for a pharmaceutical product in its relevant market. Determined the relevant market for the product. Examined the financial information for the pharmaceutical product as well as the market presence of the product. Accounted for relevant macroeconomic, industry, and company-specific factors in examining the pharmaceutical product's performance.

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Provided expert testimony in a patent infringement litigation in the commercial bakery tray industry. Conducted analyses to determine the relevant market. Determined economic damages due to lost profits on lost sales, price erosion, and reasonable royalties.

Provided expert testimony in a patent infringement investigation in the smartphone, tablet, and other wireless devices industries. Analyzed the relevant markets to evaluate whether harm to public interest was likely to occur if the Commission was to grant the Complainant an exclusion order. Evaluated the counterparties' claims regarding potential harm to public interest under the proposed exclusion order.

Provided expert testimony in a trademark infringement litigation in the tool industry. Evaluated the survey methodology used by the counterparty to determine whether there was survey evidence of secondary meaning related to the trade dress of the tools. Also evaluated whether there was a likelihood of confusion in the marketplace between the asserted trade dress and the accused trade dress.

Conducted survey research in a trademark and trade dress infringement litigation in the office supplies industry. Designed sampling approach and survey instrument used to collect data. Analyzed data collected from the survey in the context of whether there was a likelihood of confusion in the marketplace between the protected trademark and trade dress and the accused trademark and trade dress.

Provided expert testimony in patent infringement litigations in the software industry. Designed sampling approach and survey instrument used to collect data. Analyzed data collected from the survey in the context of the usage, importance, and purchasing drivers of various software features. Evaluated the counterparty's claims regarding various software features.

Provided expert testimony in a trademark infringement litigation in the vegetable produce industry. Evaluated the survey methodology used by the counterparty to determine whether there was survey evidence of a likelihood of confusion between the asserted trademark and the accused trademark. Determined whether survey data were appropriately collected and analyzed to determine likelihood of confusion.

Conducted survey research in a patent infringement litigation in the smartphone, tablet, MP3 player, and computer industries. Designed sampling approach, experimental design, and survey instrument used to collect data. Analyzed data collected from the survey in the context of the usage, importance, and willingness to pay for various product features.

Provided expert testimony in a patent infringement litigation in the medical products industry for the purposes of a preliminary injunction. Defined the relevant market for the alleged infringing products. Determined the competitive effect that the accused products would have on the counterparty's sales and product prices. Evaluated potential damages claims and the defendant's ability to pay these claims. Evaluated the likelihood that the plaintiff would be irreparably harmed by the alleged patent infringement. Evaluated the counterparty's opinions as to the effects on its sales and prices of the alleged infringement.



Provided expert testimony in a patent infringement litigation in the smartphone industry. Evaluated the survey methodology used by the counterparty to determine the usage of, importance of, and willingness to pay for the alleged patented smartphone features.

Provided expert testimony in a patent infringement arbitration in the smartphone industry. Conducted economic analyses to determine the appropriate balancing royalty payment for a cross license to each party's respective patent portfolios, which included patents, divested patents, and standard essential patents. Evaluated the counterparty's opinions as to balancing royalty payment.

Conducted survey research in a trade dress matter in the clothing industry. Designed sampling approach and survey instrument used to collect data. Analyzed data collected from the survey in the context of whether there was secondary meaning associated with the asserted trade dress.

Provided expert testimony in a patent infringement litigation in the disposable training pants industry. Evaluated the counterparty's survey research in the context of the usage, importance, and willingness to pay for various product features. Evaluated the counterparty's damages claim as it related to the use of the counterparty's survey evidence.

Provided expert testimony in a trademark infringement investigation in the shoe industry. Evaluated the survey methodology used by the counterparty to determine whether there was a likelihood of confusion in the marketplace between the asserted trade dress and the accused trade dress.

Developed survey research analyses in a patent infringement litigation in the tablet and e-reader industry. Determined the relevant market for the product. Examined the financial information for the pharmaceutical product as well as the market presence of the product. Accounted for relevant macroeconomic, industry, and company-specific factors in examining the pharmaceutical product's performance.

### **Antitrust**

Developed economic analyses addressing liability and damage issues in a litigation involving claims of Robinson-Patman antitrust violations. Analyzed the economic impact of alleged price discrimination on the sales of the plaintiff using a very large database of sales transactions on a weekly basis for every cigarette retailer in the continental U.S. over a seven year period. Developed sophisticated econometric models to quantify the amount of the economic impact. Reviewed financial and sales records to assess the impact on profits of alleged lost sales due to pricing decisions based on the higher costs.

Prepared economics analyses pertaining to the market structure, conduct, and performance for the rapid prototyping machine market. Conducted an economic analysis to determine the appropriate antitrust market. Determined the amount of market power that certain market participants had in the marketplace. Determined the effects to competition in the defined market of anticompetitive acts committed by the counterparty.

Provided expert testimony relating to the processed sugar industry which addressed whether events in that industry could have led to lost business opportunities for a firm in that industry. Conducted economic analyses to determine the appropriate market for the products at issue. Examined events in the industry and conducted industry research to determine the effects of industry events on business opportunities for that firm.

Developed economic analyses and conducted economic research to determine whether a large semiconductor manufacturer had a position of dominance in the relevant market for microprocessors. Analyzed the demand-side and supply-side substitution possibilities in the context of the determination of the relevant market. Analyzed innovation and competition in the industry to address the issue of dominance.

Developed analyses to address issues of class certification in a litigation dealing with claims of anticompetitive conduct in the wooden pallet industry. Addressed plaintiffs' proposed survey research, used to estimate damages, by examining their survey methodology using a total survey error approach.

### **General Consulting and Litigation**

Evaluated the damages suffered by a domestic manufacturer of orthopedic products as a result of a breach of best efforts clause by one of its foreign distributors. Reviewed financial and market data to gauge the performance of the distributor. Determined the revenues and profits lost by the manufacturer due to the distributor's failure to use its best efforts. Included an analysis of the value of returned inventory by the distributor to the manufacturer.

Evaluated the damages suffered by a domestic manufacturer of orthopedic products as a result of a breach of its contract with one of its domestic distributors. Reviewed financial and market data to gauge the performance of the distributor. Evaluated the use of mortality tables in the context of the plaintiff's expert report. Developed sophisticated NPV models that determined the revenues and profits lost by the distributor due to the breach of contract.

Provided consulting expertise to assist a large data collection and media ratings company in best practices improvements regarding its telephone survey operations. Conducted research into its current methods for conducting telephone surveys, including analyses of large databases of calling records and outcomes. Developed multivariate statistical models to better forecast calling outcomes and researched improved calling rules to enhance performance.

Provided expert testimony in a breach of contract litigation in which economic analyses were used to determine the loss of members and members' purchases suffered by a large hardware cooperative due to the breach of contract by a large accounting firm. Using large data sets provided by the coop, developed econometric analyses that gauged the economic impact of a large financial loss suffered by the cooperative due to the breach of contract while accounting for unrelated events surrounding the announcement of the loss.

Provided expert testimony in a breach of contract litigation related to software usage and the payment of royalties. Developed analyses that determined the number of licenses for which a software company was not paid a royalty for the use of the licenses. Evaluated the survey data and survey methodology used by the counterparty to determine the extent to which an embedded software program included in a larger software package was invoked.

Provided expert testimony in a breach of contract litigation related to product failure and the loss of business in the auto parts industry. Developed economic analyses to define properly the relevant market, estimate market size, and determine other factors that impacted the plaintiff's business. Evaluated the counterparty's use of product diffusion models to quantify damages due to lost business.

Provided consulting expertise to assist a large data collection and media ratings company in best practices improvements regarding its telephone survey operations. Conducted research of large databases of calling records and outcomes. Developed cost analyses to identify the direct and indirect costs of certain outcomes. Recommended alternative data collection methods and other best practices suggestions to minimize the costs of undesirable outcomes without compromising data quality.

Developed economic analyses to determine damages resulting from a breach of a license agreement between companies in the flat screen television industry. Evaluated counterparty's damages claims of foregone royalties and loss of enterprise value due to the breach.

Provided expert testimony in a litigation related to violations of ballot secrecy in the election of union officials. Developed statistical models to examine voting patterns and voter turnout from the contested elections to evaluate claims that the violation of ballot secrecy impacted election results. Evaluated counterparty's vote reallocation models to determine their reasonableness.

Evaluated the survey conducted by the counterparty's survey expert regarding the product characteristics and specifications that were factors in consumers' purchasing decisions of large, high-end computer servers. Conducted analyses of survey data to determine the importance of certain purchase drivers in the context of consumers' overall decision-making process.

Developed a multi-stage stratified sampling design used to draw samples from a large wholesaler of precious stones for the purposes of valuing the wholesaler's precious stones inventory. Derived formulae for the sample estimates and variances of the sample estimates. Consulted on appropriate sample sizes to obtain desired level of precision for the sample estimates. Programmed the sample design and calculation of sample estimates and variances using statistical software.

Developed economic analyses using multiple, large databases to evaluate competitive relationships between certain trade shows in the trade show industry. Determined whether certain trade shows detracted from the commercial success of other trade shows. Developed a survey and sampling methodology to collect relevant economic data. Developed approaches to determine the amount and degree of competitive overlap across various trade shows.

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## Finance

Reverse engineered and critiqued an expert's 10(b)-5 damages model surrounding the quantification of financial losses by a class of the company's shareholders. Proposed possible adjustments to the model that would provide a more reliable estimate of damages. Developed a large database and the modeled daily stock prices and trader activity for a five year period.

Conducted financial analyses of a trader's trading activity where it was alleged the trader late traded into and out of various mutual funds over approximately a three year period. Constructed a large data base of every S&P futures transaction for approximately a six year period and a large database of all of the trader's trades. Analyzed the trading activity of the trader using these databases. Developed econometric models based on this analysis to determine to what extent, if any, the trader late traded. Evaluated the econometric models provide by the counterparty alleging late trading.

Conducted and consulted on analyses of traders' and mutual employees trading activities in which simulation of trading activity was done following pre-specified trading rules to determine the total next-day net NAV return and the amount of dilution for trading within a given mutual fund. Analyzed and consulted on the comparison of simulation based on these pre-specified trading rules to litigants' trading activities as well as to baseline simulations where next-day net NAV return and the amount of dilution was determined from trading done on randomly determined trade days.

Provided expert testimony in a malpractice litigation concerning issues related to a company's reorganization of its debts. Conducted and evaluated various analyses, including event studies, to determine the effect information in the proxy statement for a bond offering, as well as other information available at that time, had on the litigant's bond prices.

Provided expert testimony in a bankruptcy litigation involving the valuation of PCS licenses in the wireless telephone industry. Evaluated econometric models used to value the PCS licenses by the counterparty's expert. Examined factors that impacted license value and determined appropriateness of the valuation models.

Conducted economic analyses to determine the likelihood of lending discrimination by a large finance company in the market for consumer automobile loans. Examined and developed large databases that included financing transactions between the large lender and individual borrowers. Developed sophisticated econometric models to determine whether evidence suggested lending decisions were made on the basis of inappropriate consumer characteristics.

Conducted economic analyses of various reasons for the magnitude and change in personal bankruptcy filings used for credit risk management and marketing analytics in the credit card industry. Developed statistical models based on various economic variables to explain and forecast personal bankruptcy filings. Developed forecasts of underlying primitive variables in the overall forecasting models.

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Conducted survey research in a litigation in the private equity fund industry. Designed the survey questionnaire and sampling approach used to collect data. Analyzed data collected from the survey to examine investors' decision-making processes and which characteristics of private equity funds influence investors' decisions.

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Journal of Official Statistics, Public Opinion Quarterly, Survey Methodology

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"Flying through Turbulence: Key Take-Aways from Recent Patent Damages Decisions." 2011 Locke Lord IP Damages Summit, Dallas, TX, October, 2011.

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"Price Erosion and Elasticity of Demand: Are the Courts Getting it Right?" *IP Remedies* (American Bar Association), (July 2008).

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- 2005 American Association for Public Opinion Research Annual Meeting, Miami, FL, May 2005.
- 2004 American Statistical Association Annual Meeting, Toronto, Ontario, August 2004.

"An Index to Measure and Track Consumer Debt Conditions" with Lucia F. Dunn and Paul J. Lavrakas, 2000 American Statistical Association Annual Meeting, Indianapolis, IN, August 2000.

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"Investigating Unit Non-response in a RDD Survey", with Paul J. Lavrakas and Elizabeth Stasny, American Statistical Association's *Proceedings of the Section on Survey Research Methods*, (1999).

"Achieving an Optimum Number of Callback Attempts: Cost-Savings vs. Non-response Error Due to Non-contacts in RDD Surveys", with Brian E. Harpuder, American Statistical Association's *Proceedings of the Section on Survey Research Methods*, (1999).

"An Examination of Call Attempts for a RDD Study: The Buckeye State Poll", 1999 Midwest Association for Public Opinion Research Annual Meeting, Chicago, Illinois, November 1999.

"Investigating Unit Non-response in a RDD Survey" with Paul J. Lavrakas and Elizabeth Stasny.

- o 54th Annual Meeting of the American Association for Public Opinion Research, St. Pete's Beach, Florida, May 1999.
- o 1998 Midwest Association for Public Opinion Research Annual Meeting, Chicago, Illinois, November 1998.

"Achieving an Optimum Number of Callback Attempts: Cost-Savings vs. Non-response Error Due to Non-contacts in RDD Surveys", with Brian E. Harpuder.

- o 54th Annual Meeting of the American Association for Public Opinion Research, St. Pete's Beach, Florida, May 1999.
- o 1998 Midwest Association for Public Opinion Research Annual Meeting, Chicago, Illinois, November 1998.

"Some Results from the Buckeye State Poll to Economic and Political Survey Questions" with Trevor N. Thompson, 58th Annual Meeting of the Ohio Association of Economists and Political Scientists, Columbus, Ohio, October 1998.

"Money Demand and the Moderate Quantity Theory of Money" with J. Huston McCulloch, Fall Meeting of the Midwest Macroeconomics Association, Bloomington, Indiana, September 1998.

"Consumer Confidence and Interest Rate Measures Using Survey Data" with Lucia F. Dunn, Meeting of the Columbus Association of Business Economists, Columbus, Ohio, November 1997.

## PROFESSIONAL AFFILIATIONS

American Economic Association

American Statistical Association

American Finance Association

American Association of Public Opinion Research

International Trademark Association

Licensing Executives Society

Intellectual Property Owners Association



# Exhibit 2

**JEFFERY A. STEC**

Vice President

**PREVIOUS TESTIMONY**

American National Can Company v. Continental PET Technologies, Inc. Case No. B90-558 (EBB), United States District Court – District of Connecticut. Expert Report, Response Expert Report, Deposition Testimony.

Cigarettes Cheaper! v. R.J. Reynolds Tobacco. Case No. 99 C. 1174, United States District Court – Northern District of Illinois, Eastern Division. Declaration.

MKS Software v. Mentor Graphics Corporation. Case No. 02-424-A, United States District Court – Eastern District of Virginia, Alexandria Division. Expert Report.

Peaceable Planet, Inc. v. Ty Inc. and H. Ty Warner. Case No. 01 C 7350, United States District Court – Northern District of Illinois. Declaration.

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TruServ Corporation v. Ernst & Young. Case No. 51 Y 181 01333 02, American Arbitration Association. Expert Report, Rebuttal Expert Report, Deposition Testimony, Arbitration Testimony.

Smith Wholesale Company, Inc. et al. v. R.J. Reynolds Tobacco. Case No. 2:03-CV-30. United States District Court – Eastern District of Tennessee. Declaration.

JLJ, Inc. et al. v. Santa's Best Craft, et al., Case No. C-3-02-00513. United States District Court – Southern District of Ohio. Rebuttal Expert Report.

Ventas, Inc. v. Sullivan & Cromwell, Civil Action No. 5232-02. Superior Court of the District of Columbia. Expert Statement, Deposition Testimony.

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Leelanau Wine Cellars, Ltd. v. Black & Red, Inc. d/b/a Chateau de Leelanau et al. Case No. 1:01-CV-319. United States District Court – Western District of Michigan. Declaration, Deposition Testimony, Trial Testimony by Designation.

Mark A. Freeman and Timothy K. Stringer v. Gerber Products Company. Case No. 02-2249-JWL. United States District Court – District of Kansas. Declaration.

Elaine L. Chao, Secretary of Labor, U.S. Department of Labor v. Local 1700, Amalgamated Transit Union. Case No. 2:05 CV 718 PGC. United States District Court – District of Utah, Central Division. Expert Report, Deposition Testimony.

In re: Airadigm Communications, Inc. Case No. 06-10930. United States Bankruptcy Court – Western District of Wisconsin. Rebuttal Expert Report, Deposition Testimony.

Cozad Trailer Sales, LLC v. Rackley Bilt Trailer Sales, Inc. et al. E.D. Case No. 2:05-cv-01181 WBS DAD. United States District Court – Eastern District of California, Sacramento Division. Expert Report.

Fendi Adele S.R.L., et al. v. Burlington Coat Factory Warehouse, Inc., et al. Case Nos. 06-CV-0085 (LBS) (MHD); 06-CV-0243 (JES) (MHD); 06-CV-0244 (JES) (MHD); 06-CV-0245 (JES) (MHD); 06-CV-7084 (JGK) (MHD). United States District Court – Southern District of New York, Declaration.

Lucky Brand Dungarees, Inc. and Liz Claiborne, Inc. v Ally Apparel Resources LLC d/b/a Get Lucky, Key Apparel Resources, Ltd., Marcel Fashion Group, Inc. and Ezra Mizrahi. Civil Action No. 05 CV 6757-LTS. United States District Court – Southern District of New York, Rebuttal Expert Report, Deposition Testimony.

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SRAM Corporation v. Formula S.R.L. and Perigeum Development, Inc. d/b/a Formula Brake U.S.A., No. 1:06-CV-1025 and No. 1:07-CV-1565. United States District Court – Northern District of Illinois, Eastern Division. Rebuttal Expert Report, Deposition Testimony.

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Airframe Systems, Inc. f/k/a Airline Software, Inc., v. Raytheon Company and L-3 Communications Corporation, No. 1:08-cv-11940-WGY. United States District Court – District of Massachusetts. Rebuttal Expert Report.

Justin P. Toronyi *et al.* v. Honeywell International Inc. *et al.*, No. 09 L 14818. Circuit Court of Cook County Illinois County Department – Law Division. Rebuttal Expert Report, Deposition Testimony.

CNH America LLC and Blue Leaf, L.P., Inc. v. Kinze Manufacturing, Inc. No. 08-945-GMS. United States District Court – District of Delaware. Expert Report, Second Expert Report, Deposition Testimony.

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In the Matter of Certain Wiper Blades. United States International Trade Commission, Washington, D.C. Investigation Number 337-TA-816. Expert Report, Rebuttal Expert Report, Deposition Testimony, Declaration, Expert Witness Statement, Rebuttal Expert Witness Statement.

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ORBIS Corporation v. Rehrg Pacific Company. No. 12-cv-1073-JPS. United States District Court – Eastern District of Wisconsin Milwaukee Division. Declaration, Expert Report, Deposition Testimony.

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Symantec Corporation v. Veeam Software Corporation. No. 3:12-cv-00700 SI. United States District Court – Northern District of California San Jose Division. Expert Report, Declaration.

In the Matter of Certain Wireless Devices with 3G and/or 4G Capabilities and Components Thereof. United States International Trade Commission, Washington, D.C. Investigation Number 337-TA-868. Expert Report, Deposition Testimony, Expert Witness Statement, Rebuttal Expert Witness Statement, Hearing Testimony.

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Ferring B.V. v. Perrigo Company, Perrigo Company PLC, Perrigo Company of Tennessee, Perrigo New York Inc., and Fera Pharmaceuticals, LLC. No. 2:14-cv-01653. United States District Court – Eastern District of New York. Expert Report.

Signal IP, Inc. v. American Honda Motor Co., Inc. and Honda of America Mfg., Inc. No. 2:14-cv-2454. United States District Court – Central District of California. Rebuttal Expert Report, Deposition Testimony.

Ferring Pharmaceuticals, Inc. v. Braintree Laboratories, Inc. No. 13-cv-12553. United States District Court – District of Massachusetts. Expert Report, Rebuttal Expert Report, Deposition Testimony, Declaration. Supplemental Report.

Avid Technology, Inc. v. Media Gobbler, Inc. No. 1:14-cv-13746 PBS. United States District Court – District of Massachusetts. Rebuttal Expert Report, Deposition Testimony.

Linkepic Inc., GMAX Inc., Veoxo Onc., and Justin London v. Vyas, LLC, Mehul Vyas, Karl Wittstrom, and Ryan Tannehill. No. 12-cv-9058. United States District Court – Northern District of Illinois Eastern Division. Expert Report.

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Toyo Tire & Rubber Co., Ltd. et al. v. Atturo Tire Corporation, et al. No. 1:14-cv-00206. United States District Court – Northern District of Illinois – Eastern Division. Expert Report.

## CERTIFICATE OF SERVICE

I hereby certify that on this 15th day of September, 2017, a copy of the foregoing pleading was provided to each of the parties on the attached service list, both electronically via the Copyright Royalty Judges' eCRB electronic filing system for those parties receiving service through eCRB, and also by Federal Express overnight mail.

/s/ Lucy Holmes Plovnick  
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